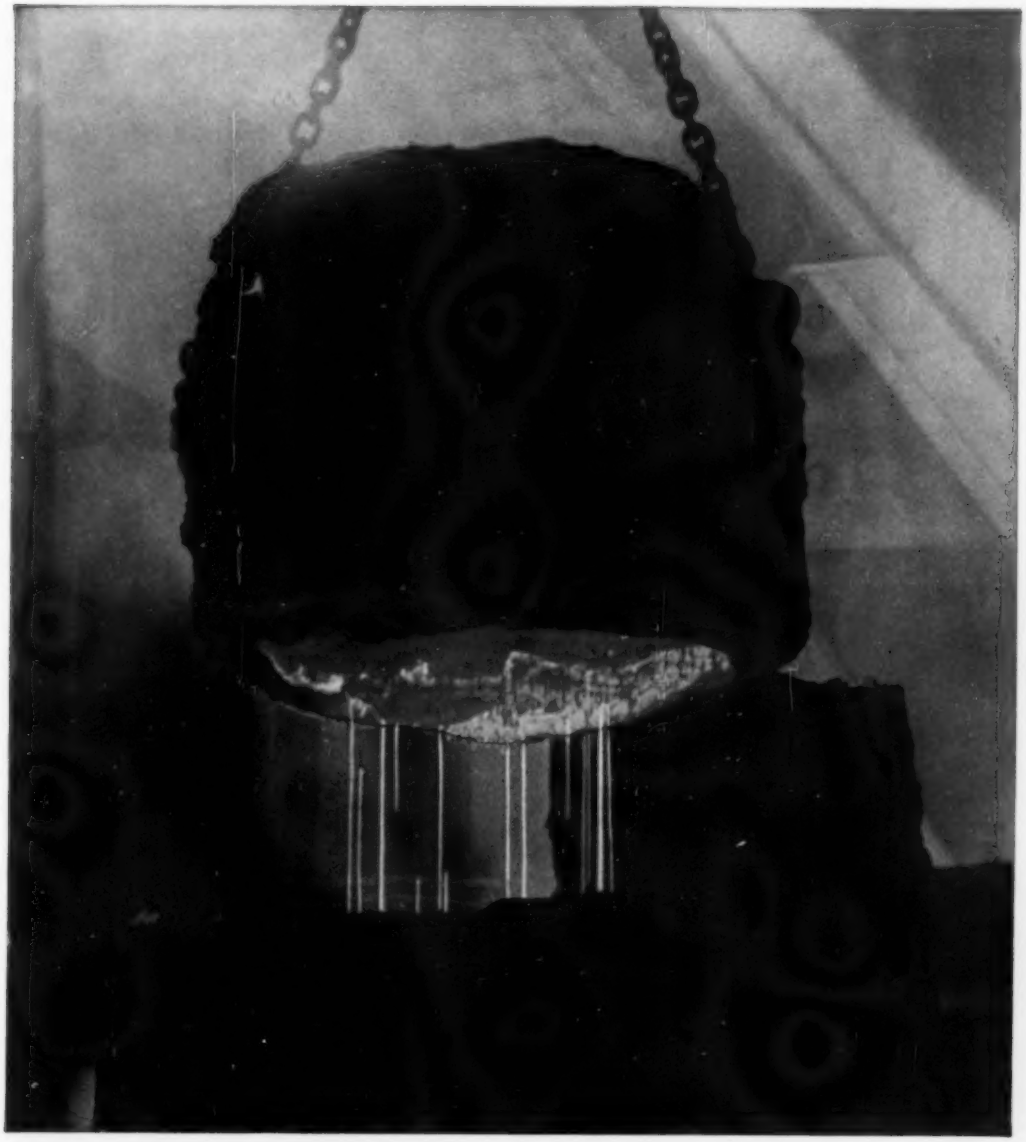
AUGUST, 1960

Brick & Clay RECORD

A CAHNERS PUBLICATION



INCANDESCENT "pig" of aluminum oxide is lifted from its carbon base and set aside to cool at Norton Company plant (See Page 5)

THIS ISSUE

The Locher Brick Company Story
Experience is Key to Haydite Production
Reports on SCPRF and L.W. Aggregate Meetings

"For Toughest Problems, Bonnot Equipment Provides Most Dependable Answers," say Davis Firebrick Production Specialists

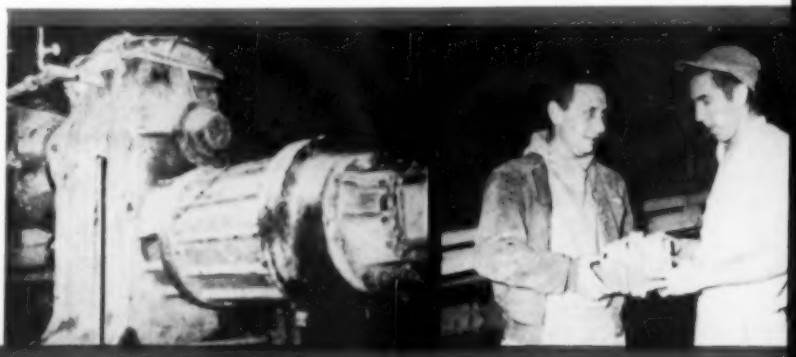
One look at the colorful Catalog and Data Manual covering the hundreds of refractory products manufactured by the Davis Firebrick Company, of Oak Hill, Ohio, gives some idea of the *multiple clay processing problems to be solved effectively and economically.*

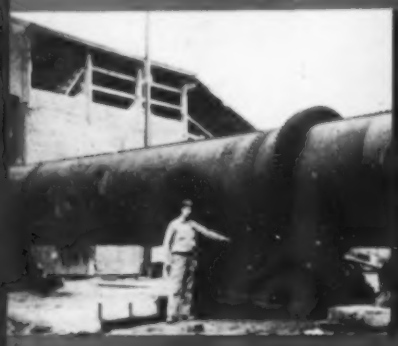
For years Bonnot Equipment — FROM EXTRUDERS TO DISC FEEDERS AND ROTARY KILN FOR CALCINING CLAY — has been a major factor in maintaining production schedules required by the largest independent refractory producer in the world.

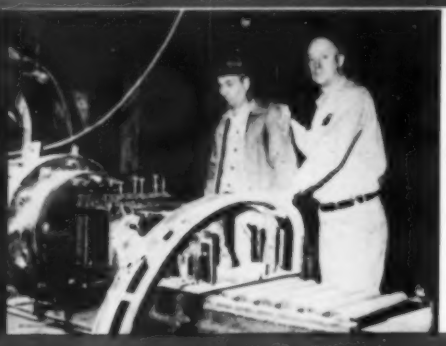
DAVIS PLANT...

"Good sound equipment we can count on all the time," is the way Jack DeHart, (right, center) Production Manager, and Bob Sutton, describe a Bonnot Challenger extruder. "We sure like the 'solid front' because the 1-piece design entirely eliminates pesky leaks."

Production includes 9" series brick, back circles, kiln bottoms and many special shapes — with an average day's run in excess of 12,500 refractory units . . . "without any worries about downtime or workability of the clay."







SIVAD CERAMICS..

24 hours a day, 7 days a week on year-'round sche since 1954 typifies the demands made on the 100'- Bonnot Rotary Kiln used for calcining clay, points Production Manager William Sutton, (left, center).

Subsequently this material is fed by Operator Howard H (center) into a Bonnot Challenger that extrudes de- plastics for many types and sizes of "plastic firebr Sivad specialties are shipped into Canada and dow South America, as well as throughout the United Stat meeting both government and commercial specificat

CAMBRIA PLANT...

Cupola linings, acid brick and an amazing variety of intricate refractory shapes are produced in surprising volume daily in the Blackford Plant by a Bonnot Viking.

"Our clay is tough to handle," reports Plant Manager Ed Smith, (center). "But since we began using a Bonnot machine in 1941 we've been able to keep production up to schedule while we hold down maintenance expense."

Circle Service No. 11

The BONNOT Co.
CANTON 2, OHIO

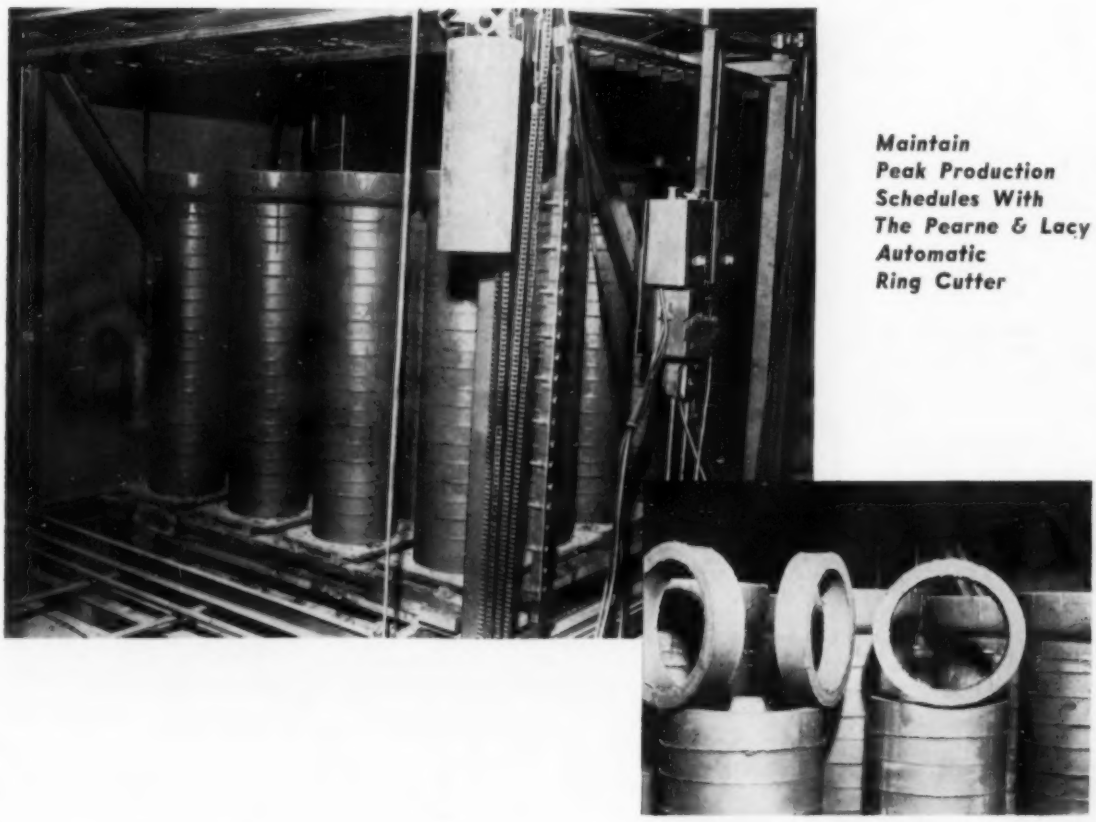
CRUSHERS	AUGER MACHINES	CUTTERS
HAMMER MILLS	VACUUM MACHINES	REPRESSES
DRY PANS	SPECIAL EXTRUDERS	DIES
WET PANS	PUG MILLS	MIXERS
GRINDERS	SPECIAL MACHINES TO ORDER	
FEEDERS	DIRECT FOUNDRY SERVICE	

STEP AHEAD
BONN

If you make pipe . . . you can now do

RING CUTTING

without production line interruptions



Maintain Peak Production Schedules With The Pearne & Lacy Automatic Ring Cutter

PEARNE & LACY automatic ring cutter provides accurate rings cut to specified lengths. The operation is automatic with the placing of pallet load on cutter platform. Pipe is taken direct from the production line and a full pallet load is handled at one cutting. No adjustment is required for pipe lengths of 3 to 5 feet. The cutter platform can be designed to handle any size pallet.

Specification details on request.

Engineers and Manufacturers of Automatic Handling and Finishing Equipment for the Ceramic Industry.

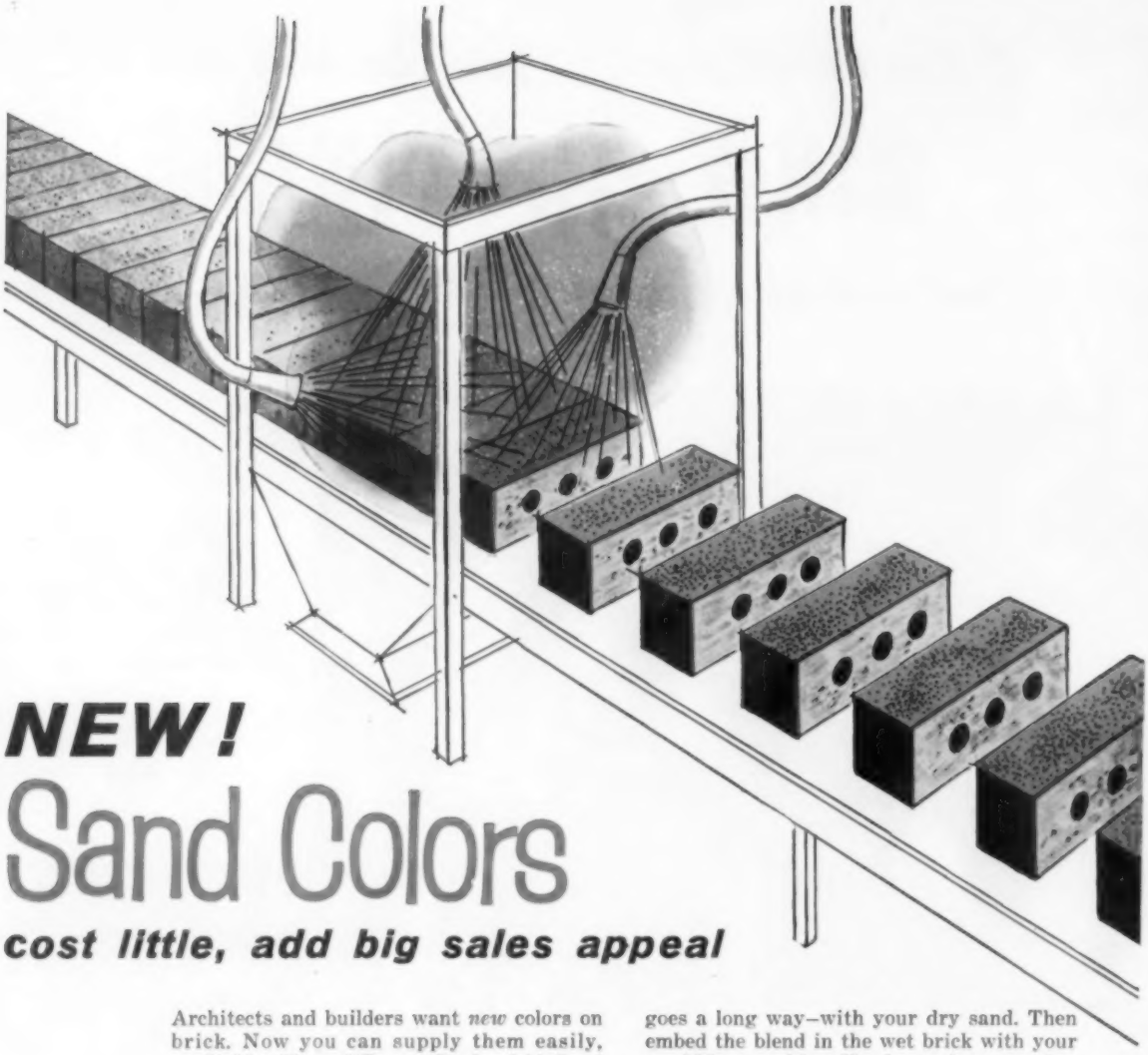
P.O. Box 3366, Terminal Annex,

Los Angeles 54, California **Phone: CU 3-1268**

Eastern Representative
Dwight B. Hendryx, 6621 Darlington Rd., Pittsburgh, Pa.

Circle Service No. 12

PEARNE AND LACY INC. MACHINE COMPANY



NEW!
Sand Colors
cost little, add big sales appeal

Architects and builders want *new* colors on brick. Now you can supply them easily, profitably. New, different Drakenfeld Sand Colors...

White	Gray	Blue
Pink	Green	Yellow

...can add salesmaking attractiveness to your brick at an average cost of only $2.50 per 1000 bricks. (Cost may vary from $1.00 to $4.00, depending upon type of sand and desired depth of color.)

Here's how to do it: Get a supply of Drakenfeld Sand Colors. Mix 2% to 8% color—a little goes a long way—with your dry sand. Then embed the blend in the wet brick with your sand blast machine. No change in processing required. No color drying time needed. Your brick can be face set immediately.

New Drakenfeld Sand Colors do not segregate in the mix, are truly bright, and adhere solidly. They can also be applied in sand mold and sand roll-on processes.

Drakenfeld offers a variety of other consistently uniform coloring materials—glaze stains, glaze specks, prepared glazes, engobe stains – to suit every process. We welcome your inquiry.

CALL ON **Drakenfeld**

YOUR PARTNER IN SOLVING COLOR PROBLEMS

B. F. DRAKENFELD & CO., INC.

Executive Offices: **45 Park Place, New York 7, N. Y.**

Factory and Research Center: **Washington, Pa.**

Pacific Coast Agents:

BRAUN CHEMICAL COMPANY, 1363 So. Bonnie Beach Place
LOS ANGELES 54, California Phone: ANgelus 9-9311

BRAUN-KNECHT-HEIMANN COMPANY, 1400 Sixteenth Street
SAN FRANCISCO 19, California Phone: HEmlock 1-8800

95-1

Circle Service No. 13

ABOUT THE COVER

The year 1960 marks the 75th anniversary of the founding of the Norton Company of Worcester, Mass., manufacturers of special refractories and abrasives. This giant of the industry had an insignificant beginning in a small pottery shop in Worcester where in 1873 a Swedish immigrant, Swen Pulson, invented a clay-bonded grinding wheel using national emery as the abrasive. According to a popular legend he invented the wheel on a bet only after viewing some of the early attempts at making grinding wheels utilizing glue and emery.

Today, the Refractories Div. of the Norton Co. is one of the fastest growing of the company's six divisions. Its products include molded refractories, products of aluminum oxide, (which withstands temperatures up to 4700°F), other special oxides, ceramic tool bits for the metalworking industry, ceramic catalyst supports and heat exchange pebbles, special heat resising products for the rocket industry, etc.

Inventions and new products have played an integral part in the development of the organization. Some 1200 patents have been issued to company inventors. Several of these have been significant in promoting world-wide industrial growth.

Not content to stand still this progressive company is doing extensive research in areas of high temperature materials to meet the needs for the special ceramics which play an important role in studies being done on temperatures in excess of those now possible on control.

The future of the Norton Company lies in the same area as it did 75 years ago—ceramics. From one grinding wheel to an unlimited range of products, the Norton Company stands ready to meet and conquer the challenges of the future, just as it has done in the past.

*We wish to thank the Norton Company, and the AMERICAN SWEDISH MONTHLY for their cooperation in enabling us to secure the cover picture.

THE MAGAZINE OF—Brick—Drain Tile—Structural Tile—Clay Aggregate—Terra Cotta—Roofing Tile—Refractories—Clay Pipe

BRICK & CLAY RECORD

VOL. 137, NO. 2, AUGUST, 1960

TABLE OF CONTENTS

FEATURES

New Products 25

News of the Industry 30

Minute Money Makers 38

Experience is Key to Profitable Haydite Production 40

This story is the second in a series on manufacturers of lightweight aggregate who produce aggregate with rotary kilns.

Locher Brick Spans Processing from Handmade to Modern Stiff Mud 44

Brick is made in this plant by the old hand molding methods.

A report on the SCPRF meeting at Geneva, Ill. 48

SCPRF starts second 10 years on optimistic note.

Lightweight Aggregate Meeting Held at Dearborn, Michigan 53

BRICK & CLAY RECORD is published monthly by Industrial Publications, Inc., 5 South Wabash Ave., Chicago 3, Ill. Second class postage paid at Chicago, Illinois and at additional mailing offices.

SUBSCRIPTIONS

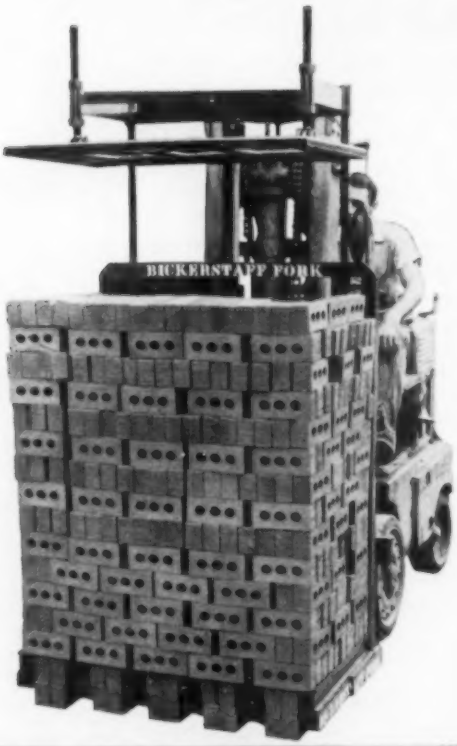
U.S.A. and Canada, $5.00 for One Year; $10.00 for Three Years. Single Copies (current issue) 75 cents. Single copy rates for back issues, $1.00. Foreign Rates, $7.00 per year; three years, $15.00.

SUBSCRIPTION RENEWALS

Forward all mail, including subscription renewals, changes of address (including new zone number, old address) orders for subscriptions, undeliverable copies, etc. to BRICK & CLAY RECORD, 5 South Wabash Ave., Chicago 3, Ill.

Published monthly and copyrighted 1960 by INDUSTRIAL PUBLICATIONS, INC., 5 S. Wabash Ave., Chicago 3, Ill., U.S.A. Norman L. Cahners, Chairman of the Board; Maurice P. Driscoll, President; F. L. Steinhoff, Exec. Vice President & Treasurer; Saul Goldweitz, Vice President; F. J. Amstadter, Secretary. BRICK AND CLAY RECORD is indexed by Engineering Index, Inc.

If you handle brick Bickerstaff can help you . .



with all lift truck attachments for your brick handling operation!

Brick handling costs money . . . but your costs are considerably less with a Bickerstaff Fork and Bickerstaff attachments. Your entire brick handling operation will run smoother. Kiln turnover is increased by 25%; kiln loading and unloading time is reduced from 72 to 12 man-hours. Pallets and strapping are "things-of-the-past" when a Bickerstaff Fork goes to work for you!

HYDRAULIC LOAD STABILIZER

Shown above in open position, at left in closed position. The Stabilizer is adjustable to the height of the package, securing it from the top. Prevents slipping and guards against brick separation as the package is moved about.

BICKERSTAFF ENGINEERS are at your service. Put them to work for you to make your brick handling more profitable. Call or write, today!

BICKERSTAFF, inc.

POST OFFICE BOX 1178
COLUMBUS, GEORGIA
CYpress 8-0455

Representatives throughout the U. S. and Canada
West Coast Representative
WALTER C. STOLL & SONS
5028 Alhambra Ave., Los Angeles, California

fork lift truck attachments

Circle Service No. 14

"ceramics" is their middle name...

Every TAM Field Engineer is a devoted ceramist. He talks your language... understands your problem or wish. Further, he does something about it... directly or through the equally capable ceramists in our plant and laboratory. Besides, he's a pleasant fellow. Call him anytime.

TAM—*the complete line of opacifiers*

SUPERPAX A
SUPERPAX
ZIRCOPAX
DOUBLE SILICATES
OPAX
OPAX S
TREOPAX

...with the complete technical service

TAM
DIVISION NATIONAL LEAD COMPANY

Executive and Sales Offices:
111 Broadway, New York City

General Offices, Works, Research Laboratories:
Niagara Falls, N. Y.

C. E. "CHICK" EVANS

TAM representative in Metropolitan New Jersey and the Middle Atlantic States, received his B.S. Degree in Ceramic Engineering from Alfred University. Chick headquarters in Franklin Park, N. J.

J. S. "JOE" GEIGER

TAM representative in Western Ohio and Michigan, received his B.S. Degree in Ceramic Engineering from the University of Illinois. Joe headquarters in Delaware, Ohio.

J. G. "JACK" MERRIAM

TAM representative in the Midwest, received his B.S. Degree in Ceramic Engineering from Alfred University. Jack headquarters in Evanston, Ill.

R. E. "RUSS" MULLADY

TAM representative in Eastern Ohio and Western Pennsylvania, received his B.S. Degree from the University of Illinois. Russ headquarters in New Philadelphia, Ohio.

D. S. "DON" PASTERNAK

TAM representative in Metropolitan New York and New England, received his B.S. Degree in Ceramic Engineering from Rutgers University. Don headquarters in Plainfield, N. J.

K. B. "KEN" STRONG

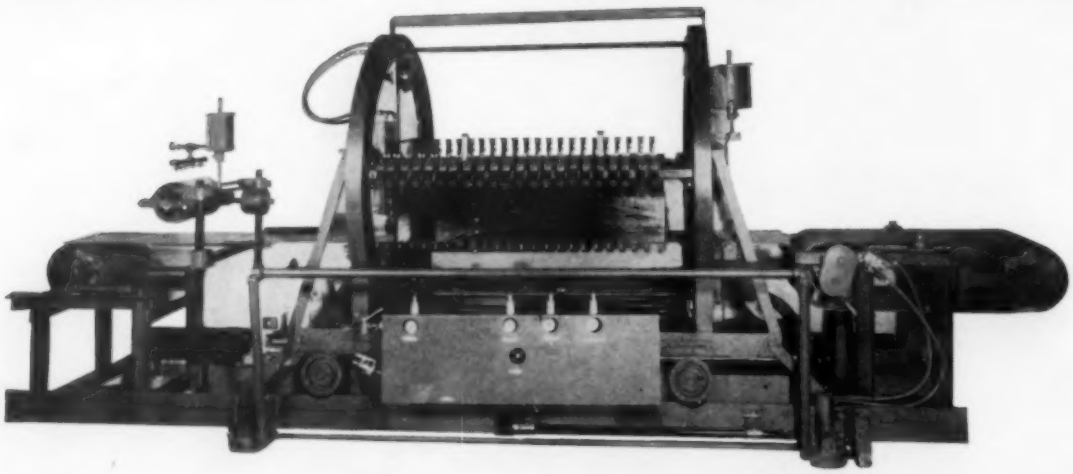
TAM representative in the South and Southeast, received his B.S. Degree in Ceramic Engineering from the University of Illinois. Ken headquarters in Nashville.

J. O. "JACK" WHITLEY

TAM representative in the Southwest, received his B.S. Degree in Ceramic Engineering from the University of Texas. Jack headquarters in Austin.

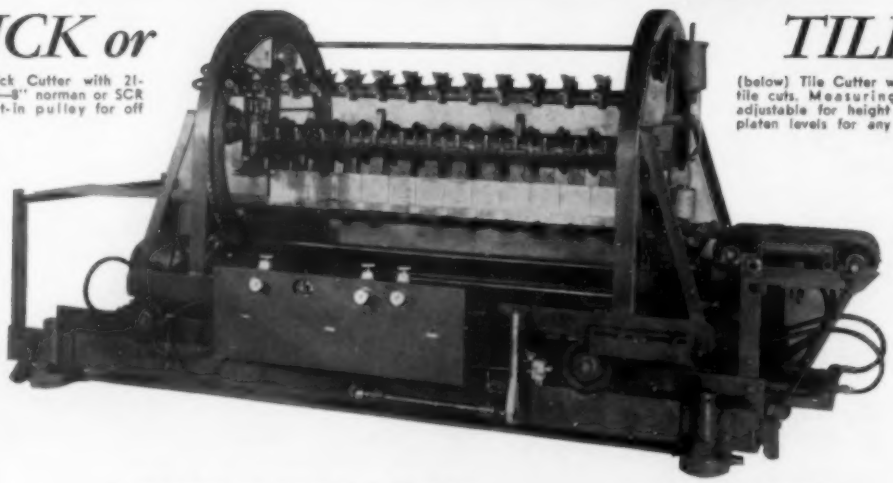
Circle Service No. 15

CHAMBERS MAKES THE CUTTERS FOR YOUR JOB!



BRICK or

(above) Brick Cutter with 21-brick platen—8" norman or SCR—with built-in pulley for off bearing belt.



TILE

(below) Tile Cutter with 12 5"-tile cuts. Measuring conveyor adjustable for height to match platen levels for any product.

CAPACITY IN CROSS SECTIONS

#32 & #33	14" x 14" 12" x 16" 8" x 18"	Green
#30 & #31	11" x 11" 9" x 13½"	Green

SPEED

Max. operating: 18 Cuts/Min.

CONTROL SYSTEM—Reciprocating motions are under air control, with tied-in air clutches to actuate rotary motion. All actuating cams are adjustable to fit any production problem, and the control valves in the main panel supply sensitive control adjustment during operation.

PLATENS—For either brick or tile, platens are built at any level to provide optimum wire cutting angles. The unique Chambers adjustable platen is ideally suited for refractories manufacture. All platens are quick-change units that do not disturb the alignment of the reel and gear assembly. In any model, platen lengths of 42", 54", or 68" can be supplied. Maximum number of brick: 27 per cut. Maximum length of tile: 5 12" pieces.

SPECIAL FEATURES—Measuring conveyor (Std., 3') can be built in any length to suit plant conditions. Off bearing belt tail pulley with take-up can be supplied with cutter (see Brick Cutter above). Lifting jack assembly can be motorized on order.

ADJUSTMENTS—One-point leveling and side adjustment guarantees perfect alignment with extruder. Measuring belt can be built with vertical adjustment if platens of different levels are used (see Tile Cutter above).

Write today for further details

SERVING YOUR INDUSTRY FOR OVER 100 YEARS

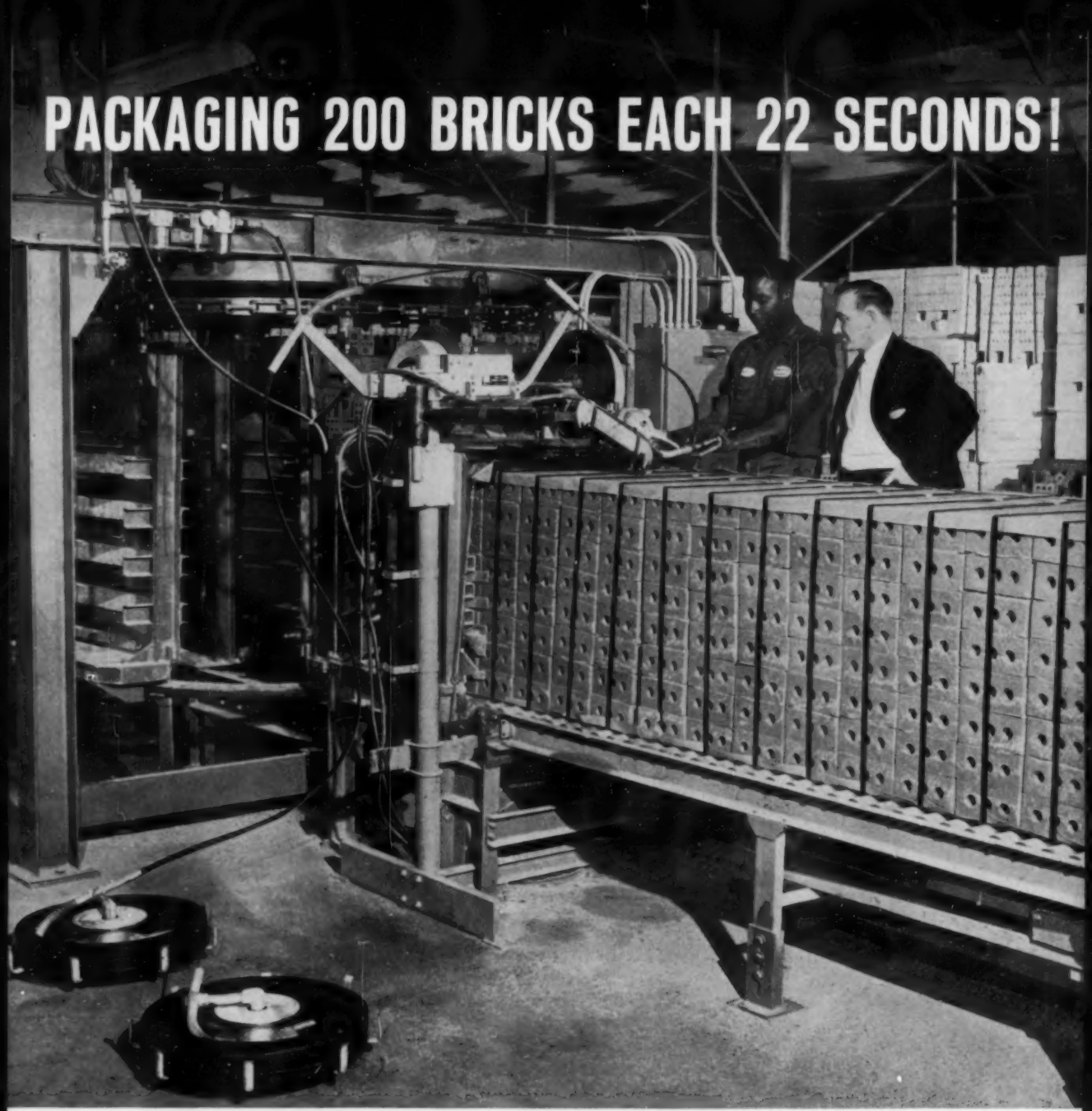
CHAMBERS BROTHERS CO.

1857 1960

52nd & Media Streets · PHILADELPHIA 31, PA.

Circle Service No. 16

PACKAGING 200 BRICKS EACH 22 SECONDS!



Acme Idea Man Ed Waters views Idea No. S3-70 at Henderson Clay Products, Henderson, Texas.

One field-proven Link-Belt/Acme Steel brick packaging machine worked so economically, Henderson Clay Products bought another.

Each machine can package 120,000 bricks in 100-brick packs per 8 hour day, with only a 7 man crew. With two machines, this producer increases efficiency and output by 40% with existing manpower—packages most of their total daily production of a quarter-million bricks.

Find out more facts about this revolutionary volume brick packaging system today. A color film on the entire method is available for group showing. Write us on your letterhead.

ACME STEEL

IDEA LEADER IN

STRAPPING

Circle Service No. 17

ACME STEEL COMPANY
Acme Steel Products Division
Dept. BCS-80
135th St. & Perry Ave.
Chicago 27, Ill.

Please send me Idea No. S3-70 and examples of how major brick producers use Acme Steel Strapping.

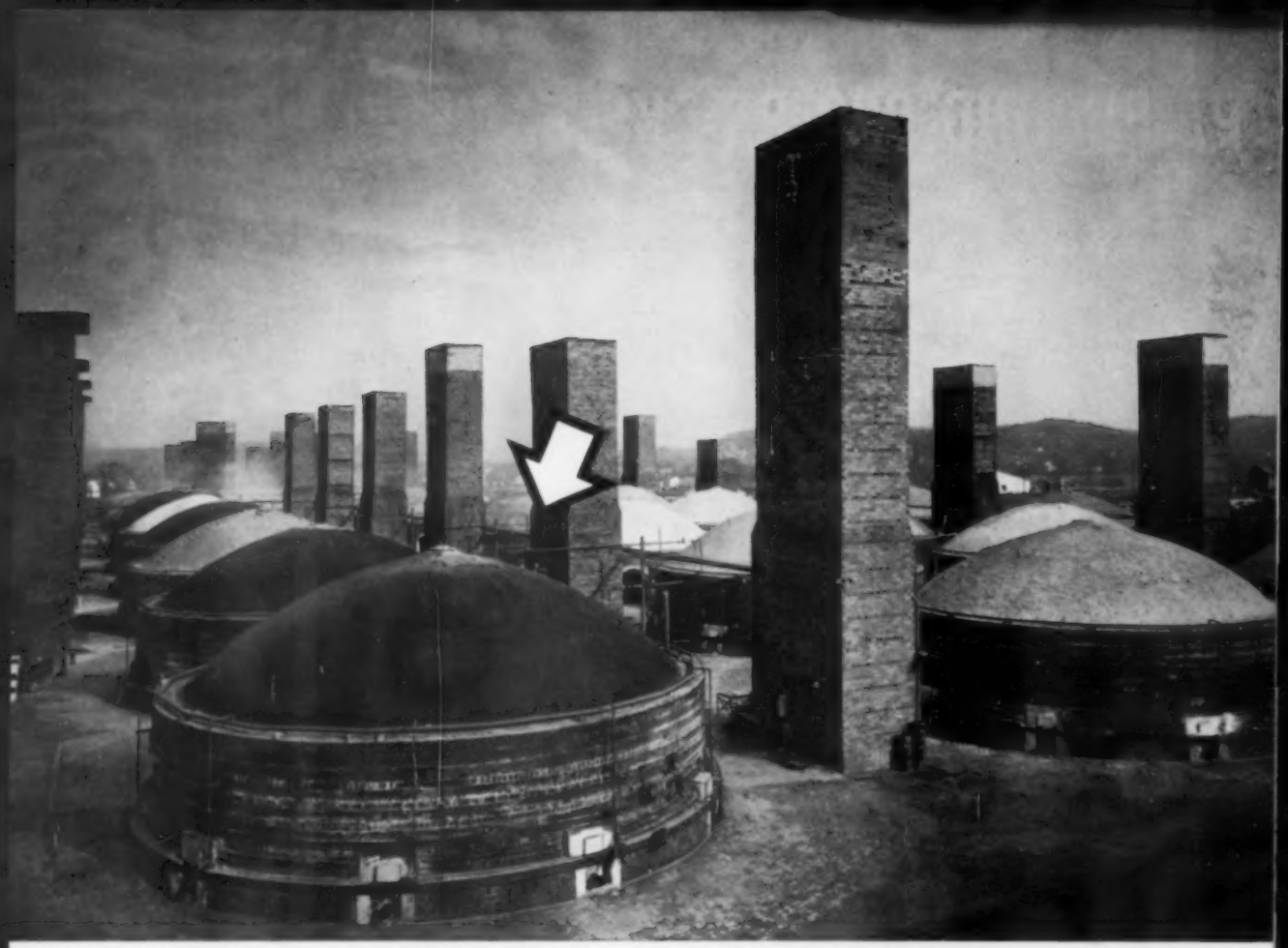
*Name*_____

*Title*_____

*Firm*_____

*Address*_____

*City*_____ *Zone*____ *State*_____



EVANS PIPE COMPANY reports:

28% metered fuel savings with B&W Insulating Firebrick

Evans Pipe Company, Uhrichsville, Ohio, metered fuel consumption to compare the performance of a B&W K-20 Insulating Firebrick crowned kiln with two heavy firebrick crowned kilns. The results showed that B&W IFB provided an average fuel savings of 28.2% per ton of ware fired. These fuel savings, in two years time, will pay for the total installed cost of the B&W IFB crown. Thereafter additional fuel savings are clear profit.

To insure accurate comparison, all three Evans Pipe kilns had the same 36′ inside diameter. The kiln charge was similar for all burns. Sidewalls of all three kilns had essentially the same heavy firebrick construction. The two heavy firebrick crowned kilns, used for comparison purposes, are the most efficient of this type in the plant.

B&W IFB are the *lightest weight insulating firebrick made.* Thus they store and conduct minimum heat. Low heat storage, due to light weight, permits faster heating and cooling of the kiln, with less usable heat lost up the stack. This results in shorter cycle time with increased production.

For facts and figures on *lightweight* B&W Insulating Firebrick, consult your local B&W Refractories Representative, or write for Bulletin R-43 to The Babcock & Wilcox Company, 161 East 42nd Street, New York 17, N. Y.

R-837

B&W THE BABCOCK & WILCOX COMPANY

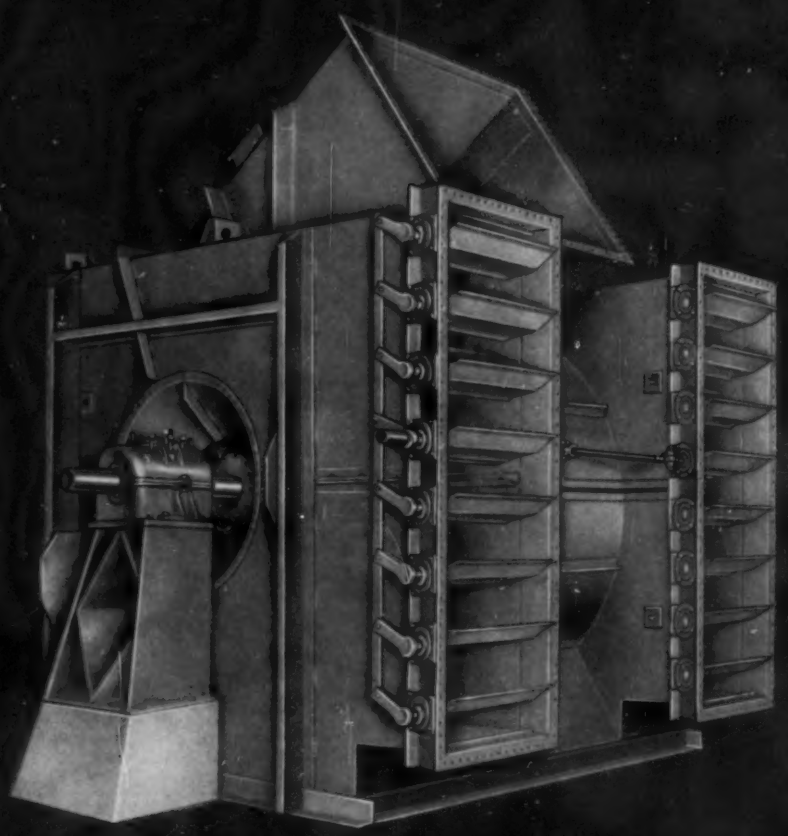
REFRACTORIES DIVISION

B&W Firebrick, Insulating Firebrick, and Refractory Castables, Plastics, Ramming Mixes, Mortars, and Ceramic Fiber.

Circle Service No. 18

Sintering • Ore Beneficiation • Rotary Kilns

TOUGH JOBS REQUIRING TOUGH FANS



Westinghouse offers you a Heavy-Duty Fan...
the right type...the right size...the right blading

These fans are designed specifically to handle abrasive gases at elevated temperatures and high pressures!

Erosion Resistance:

- Ribbed blade liners for severe abrasive service
- Flat blade liners to prevent material build-up
- Flat housing and scroll liners

All liners easily replaceable in the field.

More Information?

Call your nearest Sturtevant Division Sales Engineer, or write Westinghouse Electric Corporation, Department B63, Hyde Park, Boston 36, Mass.

J-80683

MANUFACTURING PLANTS AT HYDE PARK, MASS., LA SALLE, ILL., BERKELEY, CALIF.

YOU CAN BE SURE...IF IT'S Westinghouse

Circle Service No. 19

Bricks by Binghampton Brick Company

LEAD HELPS FIND NEW CUSTOMERS FOR BRICK

The sparkling facade that lends so much eye-appeal to the new Lenox Square Branch of Davison's famous Atlanta Department Store derives much of its vividness from lead. The architects, Toombs, Amisano & Wells, capitalized on free-flowing lead glazes to impart a permanent, glistening red beauty to the exterior of this new mecca of superior merchandise.

No matter where you look today, you find examples of ceramics that have been beautified by lead and found wider markets through its use. You see it on the exteriors of new buildings . . . on dinnerware . . . in kitchen and bathroom tiles, and on light aggregate block. And there are good reasons for this.

Lead glazes not only apply a permanent beauty to ceramics . . . but do it economically. They have high fluxing power, impart low surface tension and low viscosity to glazes . . . enable you to build-in a wide range of vivid colors that require a bare minimum of maintenance over the years.

And these are just a few of the profitable advantages to be found in lead-glazed ceramics. Get the full details. Write today for the informative booklet, "Lead In The Ceramics Industries." Your complimentary copy will be forwarded immediately. Lead Industries Association, 292 Madison Avenue, New York 17, N.Y. 2550

LOOK AHEAD WITH LEAD

Circle Service No. 20

Circle Service No. 21 →

No. 155 in a series of advertisements featuring leaders in the concrete products industry who are stepping up block production with Besser Vibrapac machines.

Off-bearer removing green block from Vibrapac at Capital Concrete Products Ltd.

First new block plant on St. Lawrence Seaway

equips with Vibrapac for profitable production

Management "team" of Capital Concrete Products Ltd. The company was founded late in 1958 by Primo Pennachetti (shown at right)

You'd naturally expect to find a Besser Vibrapac at Capital Concrete Products Ltd., Iroquois, Ontario, Canada. It is acclaimed as one of the best equipped concrete-processing operations in North America.

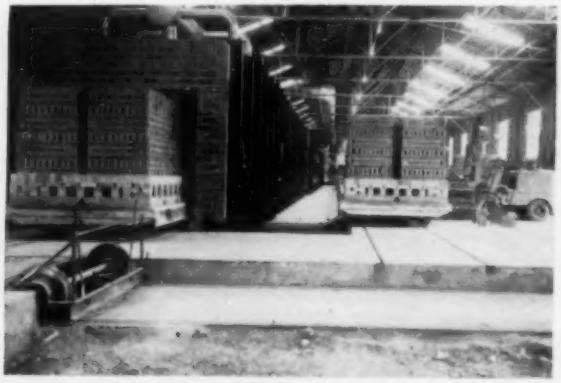
Efficiency is the watchword at Capital, one of the first new businesses to locate along the St. Lawrence Seaway. Incoming loads of expanded slag and other raw materials are delivered by self-unloading ships. Finished products are sent out by rail or truck, whichever is most suitable.

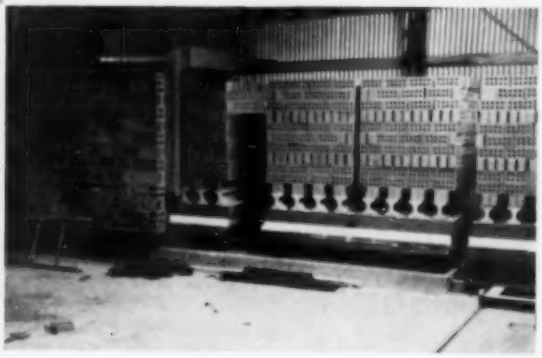
Inside operations are just as efficient. Current Vibrapac production of Thoro-Clave Lightweight Block and Autoclave Masonry Units is 8000 per day. By using the high-steam autoclave process, Capital has reduced the curing cycle from 28 days to 12 hours!

Progressive block plants like this all over the world are Besser-equipped. Wouldn't it pay you to do the same and be assured of getting better block, faster and more profitably — shift after shift? Talk it over with your Besser representative.

BESSER *Company*
Dept. 139, Alpena, Michigan, U. S. A.
First in Concrete Block Machines

A0-221





HERE ARE THE FACTS:

OHIO TUNNEL KILNS are the best suited to YOUR PLANT! They are made for all types of ware and both the largest and smallest sized production.

OHIO TUNNEL KILNS produce the most UNIFORM BURNING and even colors with the least possible loss!

OHIO TUNNEL KILNS cost less installed in your plant for they are produced in volume at a minimum cost, all the material is fabricated in our own shop and erected by our own crews!

OHIO TUNNEL KILNS will fit your operation and pocketbook! All of the exclusive features are yours at no extra cost.

***VISITORS** are always welcome at our shop and when you are close to central Ohio we would appreciate your stopping in. We will be glad to arrange to have you visit both "in-operation" and "under-construction" installations.*

FAST • EFFICIENT
CLIPPER
• LOW COST •

OHIO KILNS
GRANVILLE, OHIO • JU 2-2571

Circle Service No. 22

A. P. GREEN

INSULATING FIREBRICK

CUT FUEL COSTS . . . INCREASE PRODUCTION IN PERIODIC KILNS

There has been a tremendous increase in the use of lightweight Insulating Firebrick for lining both round and rectangular down-draft kilns.

An average saving of 20% in fuel has resulted in kilns using Insulating Firebrick in only the kiln crowns. A 35% reduction in fuel costs was accomplished in a recent installation of A. P. Green G-26 Insulating Firebrick in the side walls and crown of a 28-foot diameter, coal-fired kiln.

Other advantages of A. P. Green Insulating Firebrick in periodic kilns are—reduction in time of firing cycle because of the faster heating and cooling of the lightweight lining; more uniform heat distribution throughout the kiln and easier temperature control—resulting in fewer rejects and less breakage of the ware; more comfortable working conditions because of the faster cooling of the kiln; and ease of weatherproofing the much cooler crown with low melting asphalt base compounds.

Let your A. P. Green Representative assist you in selecting the proper quality of Insulating Firebrick for your kilns from A. P. Green's complete line—six different brick for temperatures from 2000° F. to 3200° F. He's listed in the classified section of your telephone directory . . . or write direct.

A. P. Green REFRACTORY PRODUCTS

A. P. GREEN FIRE BRICK COMPANY

PLANTS: Mexico, Mo. • Woodbridge, N. J. • Sulphur Springs, Texas • Jackson, Oak Hill, South Webster, Ohio • Philadelphia, Taremtum, Climax, Pa. • Troy, Idaho • Pueblo, Colo. • Macon, Ga. • Birmingham, Ala.

IN CANADA: A. P. Green Fire Brick Co., Ltd., Toronto 15, Ontario

Circle Service No. 23

CLAY AND CERAMIC PRODUCTS BOOKS

available from

BRICK & CLAY RECORD

1. POTTERY-GETTING STARTED IN CERAMICS—by D. W. Olson—Here the beginner will find explanations of the basic tools and processes used in ceramics, with specially prepared hands-at-work illustrations of each succeeding step. Contents: History of Pottery. Design in Clay. About Clay. Hand Forming Methods. Decorating Techniques. Glazes and Glazing. Firing Your Own Ware. The Potter's Wheel. Mold Making and Casting. How Industry Does It. Equipment Planning. (7½x10", 122 pages, $4.95.)

2. POTTERY MAKING—THE COMPLETE BOOK OF—by John B. Kenny—The modern pictorial method employed in this book, augmented by more than 100 clear, detailed drawings, cover the entire ceramic field for the beginner as well as for the more advanced potter; the wheel, modeling, burning, mold work, glaze, the kiln, composition, decoration, slips, majolica, etc. (242 pages—Cloth bound —$7.50.)

3. POTTER'S PRIMER—by Jane Snead—A good simple book to get acquainted with clay forming, mould making, glazing and firing—($1.50.)

4. POTTER'S BOOK, A—by Bernard Leach—A complete book on studio pottery by the well-known English potter who was trained in the Orient and maintains a studio pottery in England today. In the book he discusses pottery as a cultural manifestation thru the ages, treats of the raw materials in detail, describes process and simple equipment and brings in endless techniques which enrich pottery and broaden its scope. ($7.25.)

5. PRACTICAL POTTERY FOR CRAFTSMAN AND STUDENT—by R. H. Jenkins—A reliable guide to every phase of pottery, from the selection of proper equipment and material to a quick, easy grasp of the basic processes. (204 pages: $2.75.)

6. FACTORY DESIGN & EQUIPMENT, MANUFACTURE OF CLAY WARES—by T. W. Garve—Plants in all departments of clay products manufacture are described and illustrated. Includes equipment for handling, storing, grinding, screening and mixing raw materials; power, layouts, labor and housing. (304 pages, $6.00.)

7. CERAMIC GLAZES—by C. W. Parmelee—This book presents a complete study on all types of raw fritted glazes, lead and leadless. Discusses composition, preparation, application and firing. Entire ceramic literature (English and Foreign) has been reviewed for this book. No matter what glaze you use, this book will help you with your problems. ($8.00.)

8. CERAMICS FOR THE POTTER—by Ruth M. Home—Written with a museum background and with the enthusiasm of an amateur who took pains to learn pottery techniques from experts, this book has a setting in both raw material and cultural understandings that make it valuable to both the beginning and advanced potter. (229 pages—hardbound, well illustrated—$5.00.)

9. CERAMICS FOR THE ARTIST POTTER—by F. H. Norton—Suitable both for beginner and advanced craftsman. Covers pottery making comprehensively, showing not only how but also why. Abundant illustrations to clarify both artistic and technical information. Tables, charts, formulae. An excellent basic text. 320 pp. ($7.50.)

10. DRYING CLAY WARES—by Ellis Lovejoy—Illustrates and thoroughly discusses many types of dryers for all kinds of clay products. (166 pages, $4.00.)

11. POTTER'S CRAFT—by Charles F. Binns—Practical guide for the studio and workshop. It includes the preparation of clay, mold-making, turning, casting, tiles, glazing, decoration, firing and clayworking for children. ($3.95.)

12. POTTERY & PORCELAIN—by Warren E. Cox—(One Volume)—Ceramics of the world from 5,000 B.C. to contemporary times, including 5,000 illustrations, 10 color plates, 250 full-page illustrations showing the most eminent existing examples of ceramics from public and private collections. 2,000 smaller text illustrations which clarify description of decoration, form and detail. ($10.95.)

13. DUTCH STUFF—by Jane Griffith—A delightful set of intriguing full-size designs for the host of ceramics who say they cannot originate but can copy. You can copy these if you want, but you can also improvise your own based on what you find in this book, or you can combine several to produce novel and sparkling effects. ($1.25.)

14. INDUSTRIAL FURNACES—by W. Trinks (Vol. I)—Heating capacity, fuel economy, heat saving appliances, strength and durability of furnaces and the movement of gases in furnaces. (456 pages, 1934, $12.75.) (Vol. II)—Fuels, combustion devices, control of furnace temperature and furnace atmosphere, labor saving appliances, selection of fuel and furnace. (405 pages, $10.00.)

15. OPERATING THE TUNNEL KILN—by J. T. Robson—Practical "cures," indexed for difficulties encountered in firing dinnerware, artware, electric porcelain, sanitary ware, abrasives, stoneware, flower pots, drain tile, glazed facing tile, wall tile, quarry tile, terra cotta, building brick, hollow tile, refractories, sewer pipe. Includes charts, conversion tables and 110 illustrations, also 21 tunnel kiln firing curves. (150 pages, $8.00.)

BRICK & CLAY RECORD

5 South Wabash Ave., Chicago 3, Illinois

Enclosed is $..... for
The books I've checked
(circle the books of your choice)

Name .....

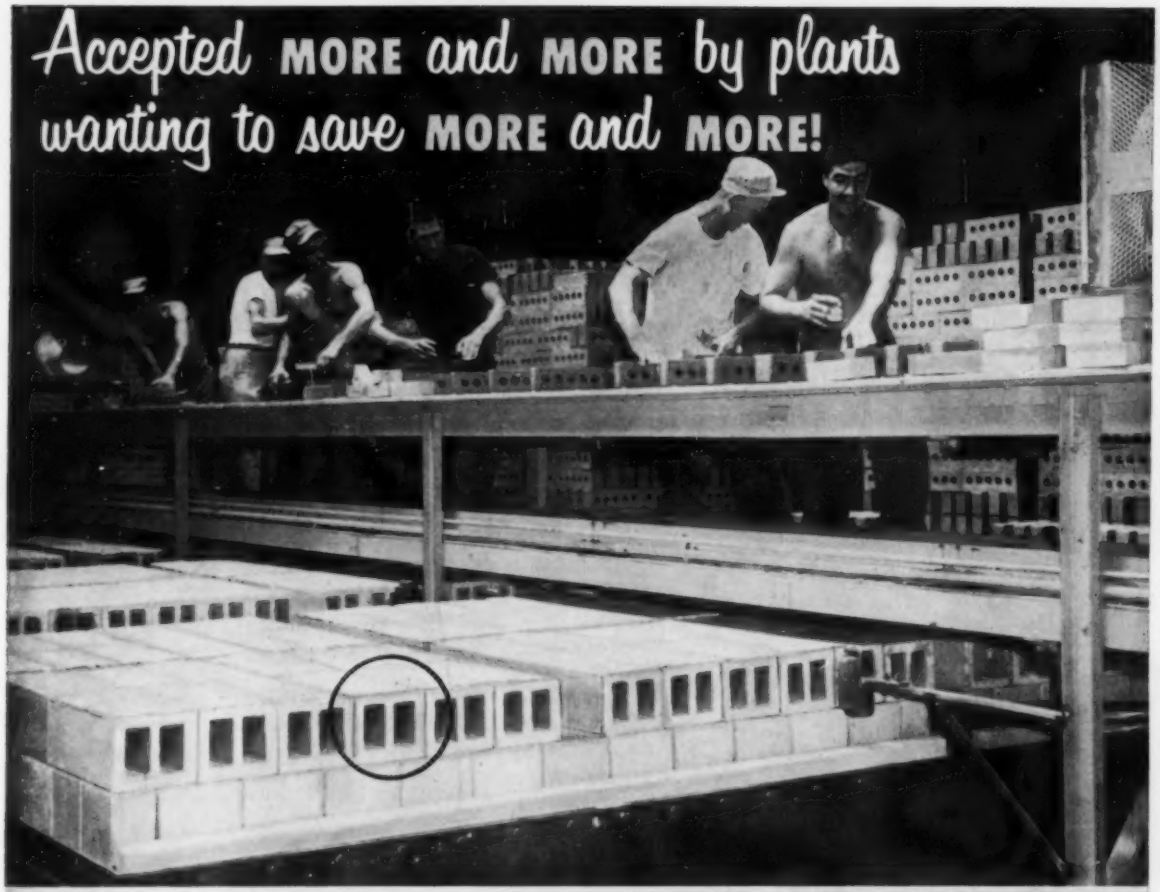
St. & No. .....

City .....

Zone ..... State .....

1. Pottery-Getting Started
2. Pottery Making
3. Potter's Primer
4. Potter's Book
5. Practical Pottery
6. Factory Design & Equipment, Manufacturing of Clay Wares
7. Ceramic Glazes
8. Ceramics For The Potter
9. Ceramics for the Artist Potter
10. Drying Clay Wares
11. Potter's Craft
12. Pottery & Porcelain
13. Dutch Stuff
14. Industrial Furnaces Vol. 1 & 2
15. Operating the Tunnel Kiln

Accepted MORE and MORE by plants wanting to save MORE and MORE!

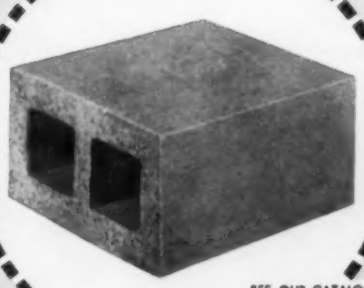


PHOTO—Cloud Ceramics No. 2 Plant, Concordia, Kansas. This modern plant uses 7" x 8½" x 19½" PACO car tops on top deck; 4½" x 8½" x 8¼" PACO car tops, with light weight insulation, for perimeter.

PACO CAR TOPS

More and more tunnel kiln brick producers are finding they can reduce car top replacement costs as much as 50% with PACO! And, here's why PACO car tops last longer. They are made from the mineral pyrophyllite, a superior raw material. The result is a stronger, lighter weight car top that is highly resistant to thermal shock. PACO car tops do not have a softening point below actual fusing point, providing greater resistance to hot load deformation. The result is better, more efficient production. They are easy to handle and install, and simple to replace individually as needs.

There is a PACO engineer as close as your telephone — or write for complete information!



SEE OUR CATALOG IN Ceramic data book

NORTH STATE PYROPHYLLITE COMPANY, INC.

Telephone [illegible]press 9-1441 Greensboro, North Carolina

OTHER PACO PRODUCTS INCLUDE: • PACO PLASTIC • PACOCAST • PACO H.T. CEMENTS • PACO FIRE BRICK MORTAR • PACO SIDE CAR BRICK • PACO FIRE BRICK • PACO LADLE LINING • PACO HEATZONE COMPOUND

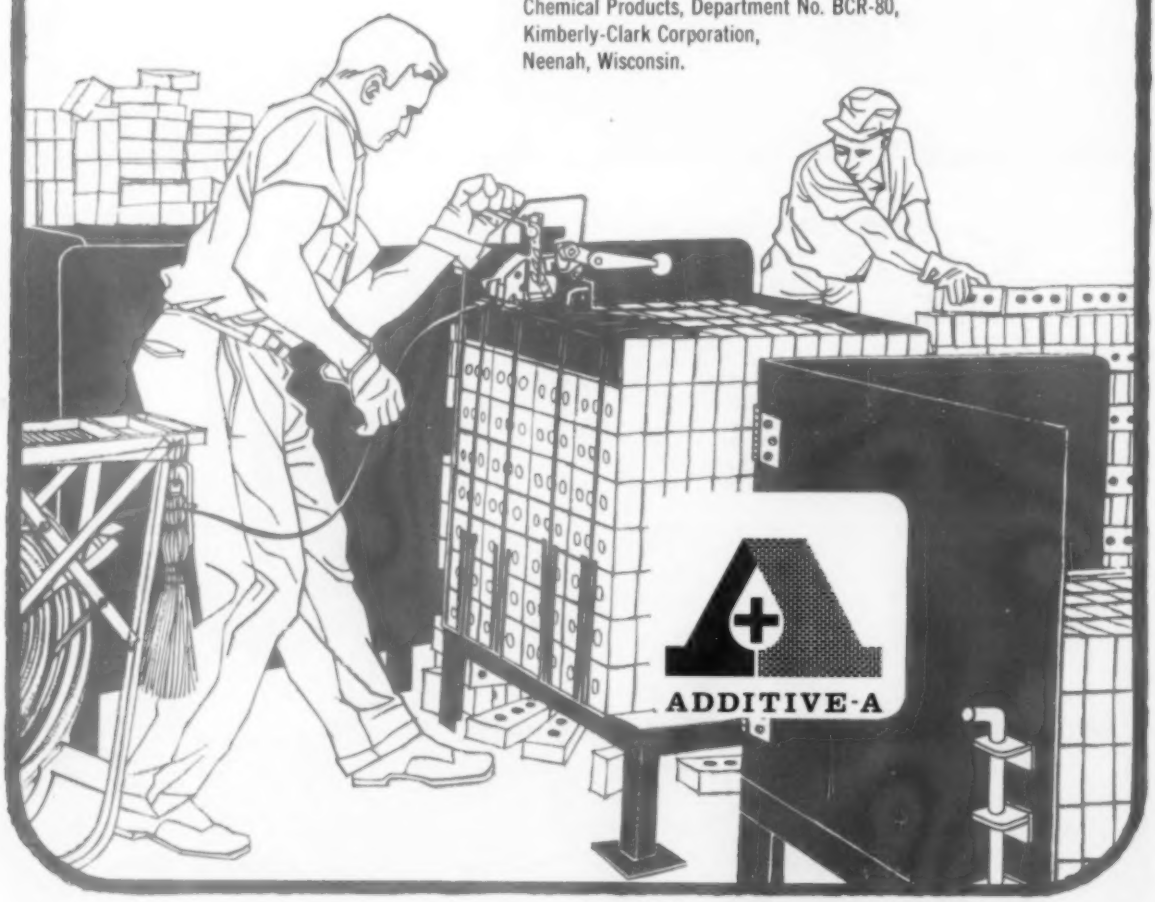
Circle Service No. 25

NORTH CAROLINA BRICKMAKER LISTS PRODUCT IMPROVEMENTS DUE TO ADDITIVE-A®!

LILLINGTON, NORTH CAROLINA—"We've made several initial improvements in our product since we began using Additive-A clay conditioner," says Mr. J. W. Norwood, secretary of Norwood Brick Company.

"We have increased the shale proportion from 30% to 50%, more than doubling the output of our grinding system. Shale being the short material, the addition of Additive-A helps to give us a stronger, more plastic green brick, while decreasing the power on our single-drive unit by eight to ten amps. The increased shale gives us a richer red at a lower firing temperature."

For descriptive folder on Additive-A, write to:
Chemical Products, Department No. BCR-80,
Kimberly-Clark Corporation,
Neenah, Wisconsin.



Kimberly-Clark Corporation Contributing Associate S C P I

Circle Service

Now you can receive FREE information on:

- Advertised Goods
- New Products
- New Literature

Service on card expires **Oct. 31**

HOW TO USE:

Simply circle the number corresponding to the advertisement or product number on the card. Mail the card and we will do the rest. You may circle as many numbers on one card as you wish.

Use this valuable service to obtain complete information about the many products available to you. Send us one card now and save the second card for later use.

Brick & Clay Record

5 So. Wabash Ave.

Chicago 3, Illinois

1	13	25	37	49	61	73	85	97	109	121	133	145	157	169	181
2	14	26	38	50	62	74	86	98	110	122	134	146	158	170	182
3	15	27	39	51	63	75	87	99	111	123	135	147	159	171	183
4	16	28	40	52	64	76	88	100	112	124	136	148	160	172	184
5	17	29	41	53	65	77	89	101	113	125	137	149	161	173	185
6	18	30	42	54	66	78	90	102	114	126	138	150	162	174	
7	19	31	43	55	67	79	91	103	115	127	139	151	163	175	
8	20	32	44	56	68	80	92	104	116	128	140	152	164	176	
9	21	33	45	57	69	81	93	105	117	129	141	153	165	177	
10	22	34	46	58	70	82	94	106	118	130	142	154	166	178	
11	23	35	47	59	71	83	95	107	119	131	143	155	167	179	
12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ ZONE ___ STATE _____

This card void after Oct. 31, 1960

First Class
Permit No. 183
Chicago, Ill.

BUSINESS REPLY MAIL
No Postage Stamp Necessary If Mailed In the United States

POSTAGE WILL BE PAID BY-

Brick & Clay Record

5 So. Wabash Ave.

Chicago 3, Illinois

First Class
Permit No. 183
Chicago, Ill.

BUSINESS REPLY MAIL
No Postage Stamp Necessary If Mailed In the United States

POSTAGE WILL BE PAID BY-

Brick & Clay Record
5 So. Wabash Ave.
Chicago 3, Illinois

1	13	25	37	49	61	73	85	97	109	121	133	145	157	169	181
2	14	26	38	50	62	74	86	98	110	122	134	146	158	170	182
3	15	27	39	51	63	75	87	99	111	123	135	147	159	171	183
4	16	28	40	52	64	76	88	100	112	124	136	148	160	172	184
5	17	29	41	53	65	77	89	101	113	125	137	149	161	173	185
6	18	30	42	54	66	78	90	102	114	126	138	150	162	174	
7	19	31	43	55	67	79	91	103	115	127	139	151	163	175	
8	20	32	44	56	68	80	92	104	116	128	140	152	164	176	
9	21	33	45	57	69	81	93	105	117	129	141	153	165	177	
10	22	34	46	58	70	82	94	106	118	130	142	154	166	178	
11	23	35	47	59	71	83	95	107	119	131	143	155	167	179	
12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ ZONE ___ STATE _____

This card void after Oct. 31, 1960

Circle Service

Now you can receive FREE information on:

- Advertised Goods
- New Products
- New Literature

Service on card expires Oct. 31

HOW TO USE:

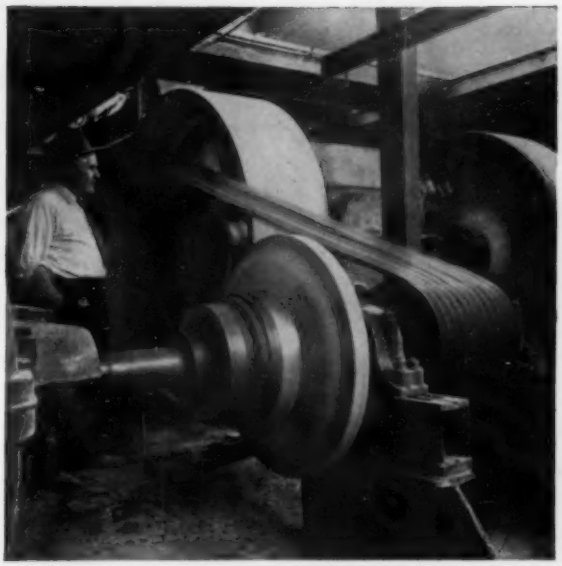
Simply circle the number corresponding to the advertisement or product number on the card. Mail the card and we will do the rest. You may circle as many numbers on one card as you wish.

Use this valuable service to obtain complete information about the many products available to you. Send us one card now and save the second card for later use.

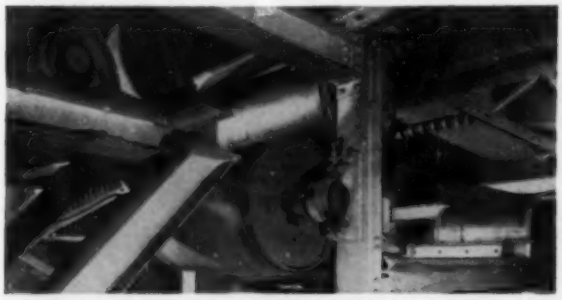
Brick & Clay Record
5 So. Wabash Ave.
Chicago 3, Illinois

How Dodge pillow blocks with Timken® bearings give longer life with less maintenance

1. Two 2⅞" Dodge Special Duty pillow blocks equipped with Timken® tapered roller bearings, support the line shaft driving six by eight foot tanning drums. The tapered design of Timken bearings enables them to take both radial and thrust loads in any combination.



2. The crusher at a trap rock and asphalt plant runs faster, gives more production now that Dodge Double Interlock pillow blocks on Timken bearings are installed. The Timken bearings in these blocks give full-line contact between rollers and races for greater load carrying capacity.



3. The Timken bearings in All-Steel Dodge pillow blocks must stand up under adverse operating conditions found when sintering metals. One major advantage of Timken tapered roller bearings is their ability to hold housings and shafts concentric, thus keeping lubricant in, dirt and dust out.

The photo at right shows the Dodge All-Steel pillow block Timken bearing equipped. The specially designed bearing has a tapered bore with self-aligning spherical outer surface—never needs adjustment.

There's a Dodge pillow block equipped with Timken bearings to fill every engineering need: All-Steel, Type "E", Double-Interlock, Type "C" and Special Duty. And with Timken bearings, space consuming thrust devices are not needed. Look for Timken bearings in all the machines you buy or build. They're the symbol of quality. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO". Makers of Tapered Roller Bearings, Fine Alloy Steel and Removable Rock Bits. Canadian Division: Canadian Timken, St. Thomas, Ont.

Industry rolls on

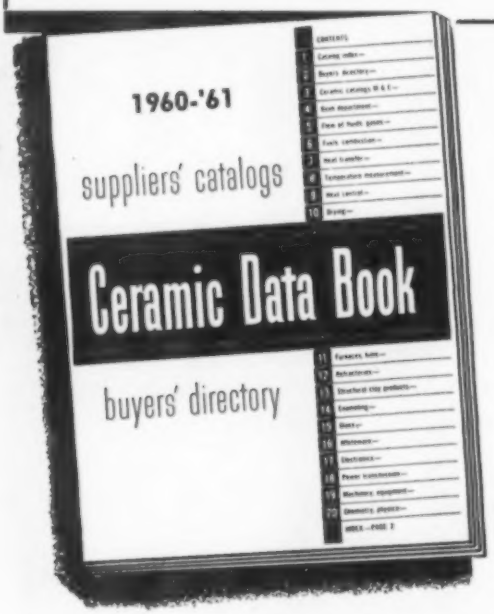
TIMKEN®

tapered roller bearings

Circle Service No. 27

MAKE RESERVATIONS NOW FOR THE BIG 1960-61

Ceramic Data Book



Completely Revised

New tabular graphic technical information for all ceramic industries and processes

Enlarged Buyers Guide and information index

New Catalogs of Equipment and Raw Materials Suppliers

Advertising Deadlines—Reservations—August 1
Complete Plates—August 15

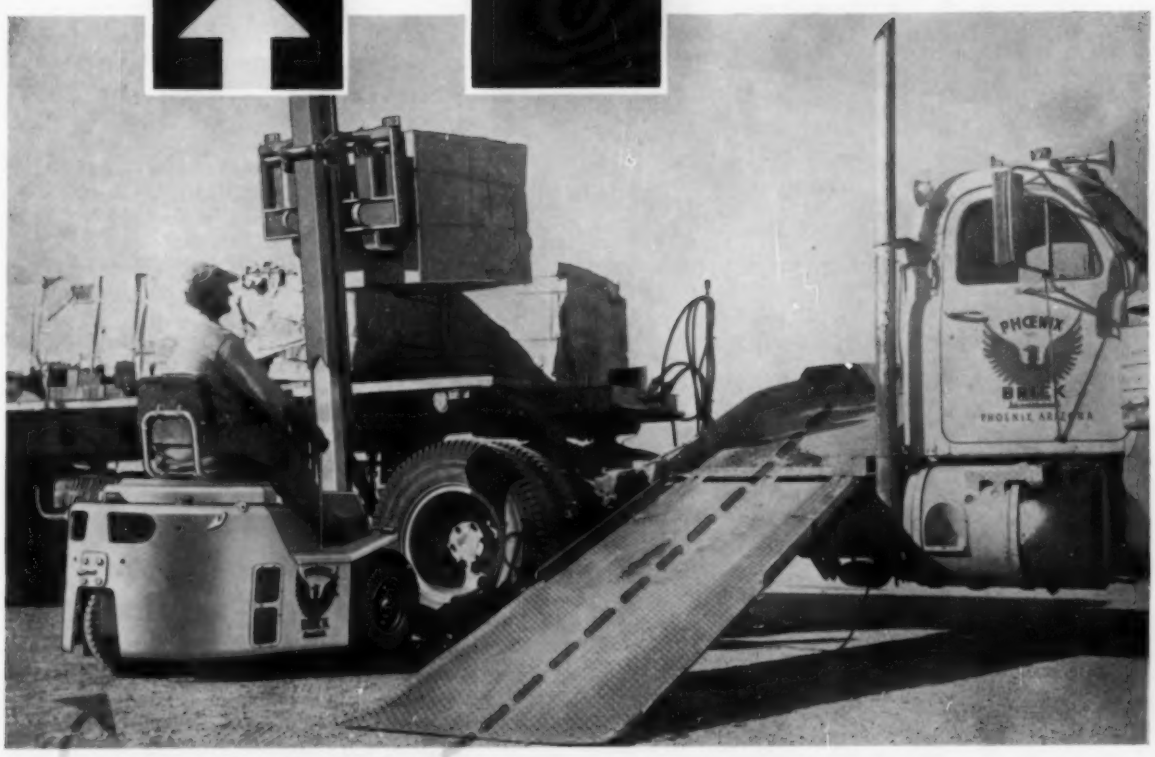
Copies Available Oct. 10—$3.50 each; $7.00 foreign

A Cahners Publication

Ceramic Data Book

5 South Wabash Avenue **Chicago 3, Illinois**

HYSTER



Monomast high visibility upright—a Hyster exclusive.

"Piggy-back" lift truck—

HYSTER® has it!

Phoenix Brick Yard, Phoenix, Arizona, carries Hyster 2,000 lb. capacity lift truck behind the cab on tractor-trailer delivery rig.

Speeds unloading at the customer's job site. Saves labor cost—only one man goes on long haul delivery.

Compact Hyster lift truck fits space not otherwise used—drives on and off folding ramp. Safer, faster than towing.

Call your Hyster dealer, or write for Field Report No. 146.

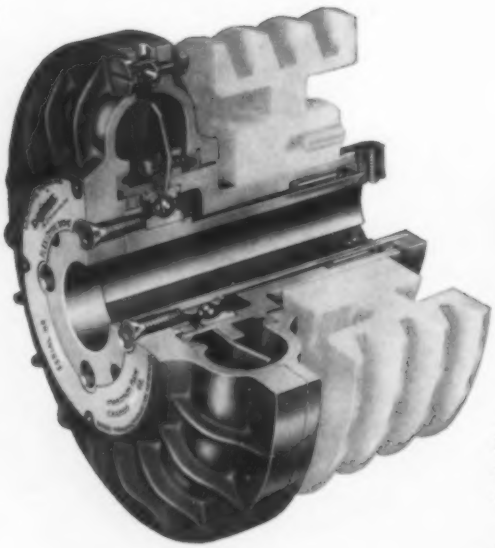
INDUSTRIAL TRUCK DIVISION—Lift trucks, mobile cranes, straddle carriers
TRACTOR EQUIPMENT DIVISION—Construction and logging equipment
MARTIN TRAILER DIVISION—Heavy machinery hauling trailers
INTERNATIONAL DIVISION—Overseas manufacturing, sales and service

Factories: Portland, Oregon (Home Office) • Danville, Ill. • Peoria, Ill. • Kewanee, Ill. • Nijmegen, The Netherlands • Glasgow, Scotland • Sao Paulo, Brazil • Sydney, Australia (Licensee)

HYSTER COMPANY
INDUSTRIAL TRUCK DIVISION
P. O. Box 847 Danville, Illinois

WHAT'S YOUR PROBLEM?...

- ☑ Overheated motors?
- ☑ Excessive belt maintenance?
- ☑ Breakage of materials being processed —like thread, wire, paper?
- ☑ Expense of oversize or high torque motors?
- ☑ High demand rate?
- ☑ Expense of reduced voltage starters?
- ☑ Clutch trouble?
- ☑ Breakage of transmission parts due to instantaneous shock loads?
- ☑ Damage and recurring down-time from overloads?



FLEXIDYNE

THE DRY FLUID DRIVE

It is no longer necessary to accept the destructiveness—the costliness—of conventional starting in the mechanical transmission of power. Flexidyne changes that!

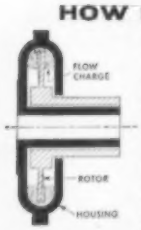
Flexidyne is the new way to start loads *smoothly*—to protect against shock and overload—to save power—all *without any sacrifice of efficiency at full load!*

This revolutionary development is ushering in "the day of the soft start"—which can mean thousands of dollars to you in equipment savings and in better, more economical operation.

Flexidyne is available, off the shelf, in Drives and Couplings. Capacities range from fractional to 1,000 hp. Ask your local Dodge Distributor or write us for technical bulletin.

DODGE MANUFACTURING CORPORATION, 4900 Union St., Mishawaka, Ind.

HOW FLEXIDYNE WORKS



The "dry fluid" in Flexidyne is tiny heat-treated steel shot. A measured amount, called the "flow charge," is contained in the housing, which is keyed to the motor shaft. Inside the housing is a rotor, free to revolve relative to the housing, but connected to the load.

When the motor is started, centrifugal force throws the flow charge to the perimeter of the housing, packing it between the housing and the rotor, which transmits power to the load. Initial slippage is momentary. Housing and rotor become locked together and achieve full load speed without slip and at 100% efficiency.

CALL THE TRANSMISSIONEER—your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look under "Dodge Transmissioneer" in the *white* pages of your telephone directory, or in the yellow pages under "Power Transmission Machinery."

DODGE

of Mishawaka, Ind.

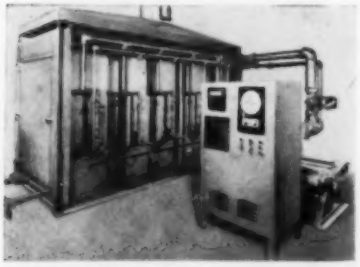
Circle Service No. 29

NEW PRODUCTS

Shuttle Kiln

Shuttle kiln for completely automatic firing up to 2500°F. (cone 13). This type of kiln can be equipped to fire up to cone 18. It is particularly adapted to the firing of many types of small ceramic wares, electrical porcelain, and special refractory shapes, using gas or oil fuel. The Harrop shuttle kiln can be equipped with a variety of controls, and usually is equipped with a cam-operated controller for a complete firing cycle. Setting space is 38″ wide by 50″ high by 144″ deep.

Harrop Precision Furnace Co.



Circle Service No. 100

Kiln Gun Shell

A new kiln gun shell engineered to cut kiln gun maintenance while increasing barrel life has been announced by C. G. Kanz, manager, kiln gun sales for Ramset Fastening System. Ramset is part of the Winchester-Western Division of Olin Mathieson Chemical Corporation.

Kiln gun barrel life can be increased as much as 200 per cent with the new shell because erosion and pitting are reduced.

The new Western industrial shell is jacketed in a special impregnated paper tube to eliminate contact between the slug and the smooth bore barrel of kiln guns.

Olin Mathieson Chem. Corp.

Circle Service No. 101

Brick Packager

Packages brick double quick. The newest development for faster, more efficient packaging—the field proven Link-Belt/Acme Steel brick packaging system that can package as many as 120,000 bricks per 8 hour day, with a 7 man crew. *Acme Steel.*

Circle Service No. 102

Colored Specks

Now colored specks to brighten your profit outlook. Add colored specks to your glaze and your brick and structural facing tile will have that "wanted look" architects write into specifications. *B. F. Drakenfeld & Co., Inc.*

Circle Service No. 103

Dry Press

A. P. Green makes a better brick with the Multi-Speed dry press drive. Result: greater density, fewer air voids, reduced roll and segregation, a better brick, fewer rejects. *Ortrug, Inc.*

Circle Service No. 104

Unit

Put the earning power of a Unit in your pit. This one does a man-sized job—has real muscle and speed to give you the power, capacity and output you require to make a profit from your pit operation. Low original operating and maintenance costs, plus reliable production, mean you earn more with a Unit from each ton of material moved. *Unit Crane & Shovel Corp.*

Circle Service No. 105

Single Roll Crusher

Pennsylvania Hercules now job-proved single roll crusher brings you lower operating, and maintenance costs. Pennsylvania has researched the factors that make single roll crushing costs mount—and come up with a new machine specifically designed, and job-proved, to keep costs down. *Pennsylvania Crushers.*

Circle Service No. 106

Tunnel Kiln

Ohio Tunnel Kilns are suited to your plant. They are made for all types of ware and both the largest and smallest sized production. Ohio tunnel kilns produce the most uniform burning and even colors with the least possible loss. *Ohio Kilns.*

Circle Service No. 107

Fuel Consumption

Metered fuel consumption to compare the performance of a B&W K-20 Insulating Firebrick crowned kiln with two heavy firebrick crowned kilns. The results showed that B&W IFB provided an average fuel savings of 28.2% per ton of ware fired. These fuel savings, in two years time, will pay for the total installed cost of the B&W IFB crown. *Evans Pipe Co.*

Circle Service No. 108

Dump Bed and Lifting Tailgate

A flat bed dump with a lifting tailgate mounted on the curb side, opens up many more possibilities for additional truck usefulness—particularly for those who handle both bulk and unitized loads. Plasterers, lathers, roofing, masonry and general contractors—and lumber-supply dealers—to name a few, have need of both types of equipment at various times.

The elevating gate is a new type known as the Watson "Hide-A-Gate." It folds up *underneath* the body when not in use, permitting easy access to the body for hand loading of lighter parcels. The Hide-A-Gate has 1200 lbs. capacity, is electric-hydraulic, and can therefore operate independently from the P.T.O. driven pump body.

H. S. Watson Co.

Circle Service No. 109

Cleated Belt

The cleated surface of a special Manhattan conveyor belt allows efficient handling of rock and gravel with high water content at the Serv-Tex Materials Co., New Braunfels, Texas. Chevron cleated Manhattan conveyor belt—this one 24″ wide—is so constructed that the cleats overlap, with its extremely tough, yet flexible nylon ply construction, replaces a smooth belt which could not carry the soupy stone and water mixture up the steep slope and limited the amount of water that could be added to the mixture. The chevron shaped cleats or ribs of the Manhattan belt provide many small pockets to trap the water so it won't flow freely. More of the power applied to the belt is now used productively, and rate of production is up. With a smooth belt, the water would run back down hill taking some of the load with it, causing unnecessary wear of the belt.

Raybestos-Manhattan, Inc., Manhattan Rubber Division.

Circle Service No. 110

New Products Con't.

Transloader

The Gismo Transloader is a one-man operated self-loading and self-dumping transport . . . a self-loading truck that shuttles back-and-forth between muck pile and the dumping point without the synchronization of several pieces of equipment or positioning of equipment to load. It keeps working full shift—loading, transporting and dumping in continuous, uninterrupted performance-cycles . . . every moment it is loading . . . or transporting . . . or dumping or returning to muck-out another load!

Sanford-Day Iron Works, Inc.

Circle Service No. 111

Air Hammer

A heavy-duty air hammer with a short barrel, the Model SP-400 has a beehive spring retainer instead of the customary stationary safety chuck so that the cutting tool can rotate. According to the manufacturer, the SP-400 is ideal for heavy-duty rivet busting, riveting and panel cutting in close quarters and "hard-to-reach" places. It can also be used for cutting drum lids, punching sheet metal, breaking spot welds. On a variety of automotive applications such as cutting shock bolts and mufflers, removing brake linings or panel cutting, the SP-400 cuts hand labor considerably.

Superior Pneumatic & Mfg. Co.

Circle Service No. 112

Heat Resistant Coatings

To protect metal at constant heat at all temperatures to 1400 degrees F., and in service requiring also resistance to varied and severe corrosive environments, a complete line of silicone and silicone-ceramic heat-resistant coatings for maintenance and OEM use is announced.

Ten High-Temperature Coatings cover entire temperature range from low through moderate to extreme high heat, air dry or heat cure in service, and are available in any color as well as aluminum. Anticipated use determines choice, assuring predictable, minimum-coat results.

The Dampney Co.

Circle Service No. 113

Tractor-Scraper

An efficient, large-capacity self-loading tractor-scraper combination is built essentially for jobs where self-loading is mandatory. The Hancock Elevating Scraper, 10 cubic yard Model 10E2, will load in surprisingly short time under moderately difficult conditions, because of the exclusive "chopping action" of the slat-type elevator. This elevator, driven by LeTourneau-Westinghouse motors, chops and pulverizes the material and carries it rapidly off the scraper blade high into the bowl, to give this scraper its high dirt-moving capacity. This soil-pulverizing action makes spreading easy and uniform and eliminates the need for a separate finishing tool.

LeTourneal-Westinghouse Co.

Circle Service No. 114

Portable Sandblaster

Recently developed and marketed nationally is the portable sandblasting unit known as the "HANDI-BLAST" Portable Sandblaster.

Designed for use throughout industry where fast, economical sandblasting is necessary for a multitude of different applications, it requires no more air than a production spray gun.

The "HANDI-BLAST" Portable Sandblaster will quickly clean mortar, cement, or dried paint from brick or other masonry leaving it clean and beautiful, as well as cleaning tools and equipment.

The manufacturer states that the "HANDI-BLAST" Portable Sandblaster, with its unique design, is the only sandblaster that is completely portable. The over-all height of the unit is 23 inches with a tank diameter of 7 inches. The unit weight is 23 pounds empty and has an abrasive capacity of 30 pounds sand. Each "HANDI-BLAST" Portable Sandblaster is tested at 300 P.S.I.

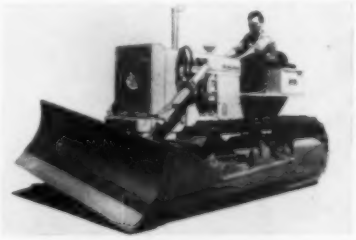
Hamill Mfg. Co.

Circle Service No. 115

Utility Dozers

New higher-output Utility dozer units—with power-angling or power-tilt blades. Job-proved for over 3 years on larger Case industrial crawler tractors, these hydraulic-powered blades are now offered mounted on 42 hp Case Model 310 Utility crawlers.

Case 310 Utility Power-Angling Dozer allows operator to angle the blade 25° left or right without having to stop the tractor and wrestle the blade into correct position by hand or other means. When side casting, he can turn around at the end of a long pass, reverse the angle of the blade from cockpit, and "doze" in the opposite direction. Or, on short passes, operator can back up, adjust the angle and start a new cut, or can start cut and adjust blade angle "on-the-go".



J. I. Case Co.

Circle Service No. 116

Twin-Power 14 Yd. Scraper

Twin-power scraper of 14 cu. yds. struck capacity and 20 yds. heaped S.A.E. rating at 1:1 slope. Designated as the Model TS-14, this all-wheel drive scraper is powered by two GM 4-71 engines, each with a separate Allison Torqmatic Drive consisting of torque converter and 4 speed semi-automatic transmission. With converter lock-up in each Torqmatic Drive maximum fuel economy is achieved with efficient use of the 296 total engine horsepower on grades and long high speed hauls.

Euclid/Div. of General Motors

Circle Service No. 117

Changes of Address

If you're due to change your address, be sure to avoid missing an issue of B&CR. Please notify us of your new address at least six weeks in advance of moving date. Write: BRICK & CLAY RECORD, 5 South Wabash Ave. Chicago 3, Ill.

Increase Your Payloads . . . On Long Hauls Or Short . . . With The **PACK-HAULER**®

It's almost like magic . . . the way one operator can load and unload 6,000 brick . . . in a matter of minutes . . . with the Pack-Hauler.

The tandem Pack-Hauler unit is easily mounted on any truck chassis, delivers cubes at any job site . . . on roughest terrain.

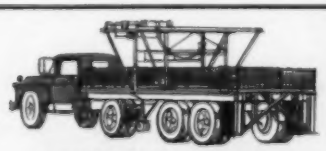
Reduce your truck fleet, make more hauls with bigger payloads . . . and pick up more profits with the Pack-Hauler.

Write today for complete information.

American Truck Body Company

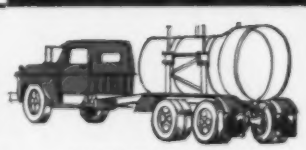
P. O. BOX 1391 • PHONE MERCURY 2-6318 • MARTINSVILLE, VA.

PACK-HAULER®



CRANE-HAULER

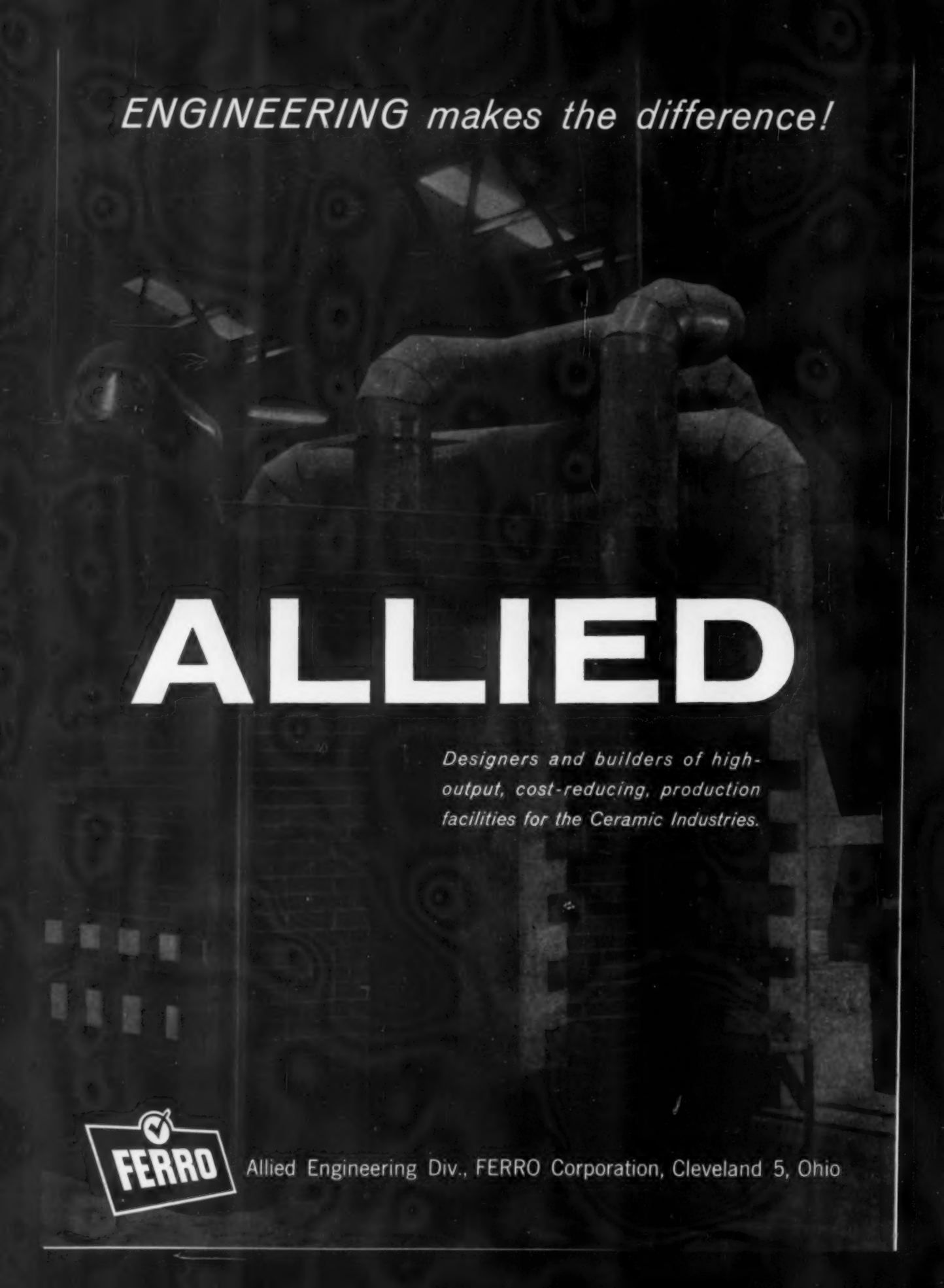
SINGLE



PIPE-HAULER

PACK-GRAB

Circle Service No. 30


ENGINEERING makes the difference!
ALLIED
Designers and builders of high-output, cost-reducing, production facilities for the Ceramic Industries.
FERRO
Allied Engineering Div., FERRO Corporation, Cleveland 5, Ohio

LEADING CLAY JOURNAL OF THE WORLD
A CAHNERS PUBLICATION

Brick & Clay RECORD

AUGUST, 1960

Vol. 137, No. 2

5 SOUTH WABASH AVE.
CHICAGO 3, ILL.
FRanklin 2-6880

Established 1892
now in 68th year.

EDITORIAL

*Fred L. Steinhoff, *Editorial Director*
John H. Van Deventer, *Publisher*
*J. J. Svec, *Vice President and Executive Editor*
Alan C. Rose, *Managing Editor*
*Neal Mohler, *Technical Editor*
Ralph A. Burris, *Advertising Production*
Kenneth A. Brent, *Consulting Editor*
Walter W. Koch, *Art Director*

SALES OFFICES

Home Office: 5 S. Wabash, Chicago 3, Ill. Franklin 2-6880: Floyd M. Burdick, Business Manager; J. B. Stringer, Sales Representative; Roy Barron, Promotion Manager; Anne Anzak, Sales Assistant

New York: Albert S. Robinson, Vice President; Harry H. Linden, 55 W. 42nd St., Room 300, NYC 36. Lackawanna 4-9662

Cleveland: Richard F. Burkhart Room 702, The B. F. Keith Building, 1621 Euclid Ave., Prospect 1-1312

Southern: John M. Printup, 121 S. E. First St., Miami, Fla., Phone: Franklin 9-2668

Dallas: R. W. "Whit" Jones, John Printup & Assoc., 2607 Millmar Dr., Dallas 28 Tex. Phone: DAvis 1-0898

California: Wentworth Green Company 439 S. Western Ave., Los Angeles 5, Phone Dunkirk 7-8135.

Pacific Northwest: Frank J. McHugh, Jr., 520 S.W. 6th Ave., Portland 4, Oregon. Phone CApital 6-2561. Also Seattle

CONTRACTS: Formal acceptance made only in Chicago.

BUSINESS

M. J. Skodon, *Vice President in Charge of Manufacturing*
R. H. Lash, *Exec. Dir. of Circulation*
H. G. Love, *Circulation Director*
*Ceramic Engineering Staff

EDITORIAL

Sanitation—An Urgent National Problem

Nixon and Kennedy along with all their high powered platform makers are neglecting a most vital need for this country. Next to defense spending, we should be investing a major part of our national, state and community budgets on revamping our sanitation systems.

If we were just about the present systems, we would not build another house to dump its wastes into our sewers. What makes matters worse is the fact that the waste, the detergents, the ground up garbage is being dumped into our rivers, streams and lakes. Pollution of our waterways is rampant and not another house should be added to the systems. Yet we must take our drinking water from these same waterways.

We emphasize this neglect on the part of both our political parties because the problem of upgrading our sanitation systems is vital and needed immediately. Not only should the systems be enlarged but the disposal should be processed and not dumped into our waterways.

Here is an opportunity, or rather duty, of every heavy clay products manufacturer to call this to his representative's attention. It's important because construction as a whole will stop if something is not done about it.

BRICK & CLAY RECORD will do its part in keeping the pot boiling on this subject and we solicit the aid of every manufacturer to call on his congressional representatives not once but constantly on this subject until the problem is solved.

J. J. Svec

E ecutive Editor

← Circle Service No. 34

NEWS OF THE INDUSTRY

Addison H. Gery, Sr., standing, vice president of Glen-Gery Shale Brick Corp., Reading, Pa., turns over his desk to his son, Addison H. Gery, Jr., who is succeeding his father as director of sales for Glen-Gery's eastern district. The senior Gery will retire July 15 after 43 years with the firm founded by his father. Addison H. Gery, Jr., also replaced his father on the firm's board of directors.

Plant Operators Forum Scheduled For Clemson In October

There will be light at this year's cookout for the Plant Operators Forum. Several complaints have been received by Professor Gil Robinson as a result of lack of illumination at the last Clemson affair but ample light for expert cooking will be available this year. The meeting will be held at Clemson, S. C., Oct. 16-19.

Fire Destroys Maryland Brick Plant

Fire destroyed the main building of the new Brick & Tile Co., Easton, Maryland recently doing an estimated $60,000.00 to $70,000.00 damages.

Owner Thomas Shockley estimated the damages and said the building apparently was hit by lightning. A nearby utility pole also showed signs of having been hit by a bolt.

Connecticut Brick Plant Under New Management

The Clark Brick Co., South Windsor, Conn., is now under new management. Robert Carpenter, President of Carpenter Engineering Services, Warehouse Point, Conn., recently announced he has purchased controlling interest in the company. John Van Ravestein is Plant Superintendent of the company. The company manufactures 60,000 soft-mud brick per day utilizing 65 men.

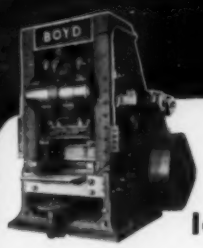
North American Refr. Co. Appoints Kane

Appointment of John F. Kane, as Chief Engineer of the Specialties Division, has been announced by E. W. Valensi, President of North American Refractories Company. In this assignment, he will be headquartered in the main office of the Company in Cleveland, Ohio. Mr. Kane is a graduate of the University of Illinois in Civil Engineering. During the past ten years, he has been in the refractories business in engineering and application of clay, basic, and specialties.

Alabama Brick & Tile Co. Completes Improvement Program

Gerald Neher, President of the Alabama Brick & Tile Co., Decatur, Ala., announced recently the conversion of 10 periodic kilns to high draft firing with 36" tube axial fans on the stub stacks. Also installed in the company's latest improvement program was a new J. C. Steele No. 18 cutter.

BOYD PRESS IS BASIC / for aluminum furnace refractories



MODEL Y delivers density needed for low porosity and resistance to corrosion

More and more refractory producers are discovering how a *step-up* to a Model Y Boyd Press can be a giant step toward filling customer demands for high alumina furnace brick.

It takes a heavy duty press to deliver the power and compaction necessary to achieve a brick that will withstand the combination of destructive forces at work in an aluminum furnace.

In Model Y, a big 37″ x 21″ x 12″ mold cavity helps you make the *most* of higher pressures to increase hourly production and/or handle larger size molds. The resultant brick is extremely dense and accurate as to size—with attending properties of low porosity and resistance to corrosion.

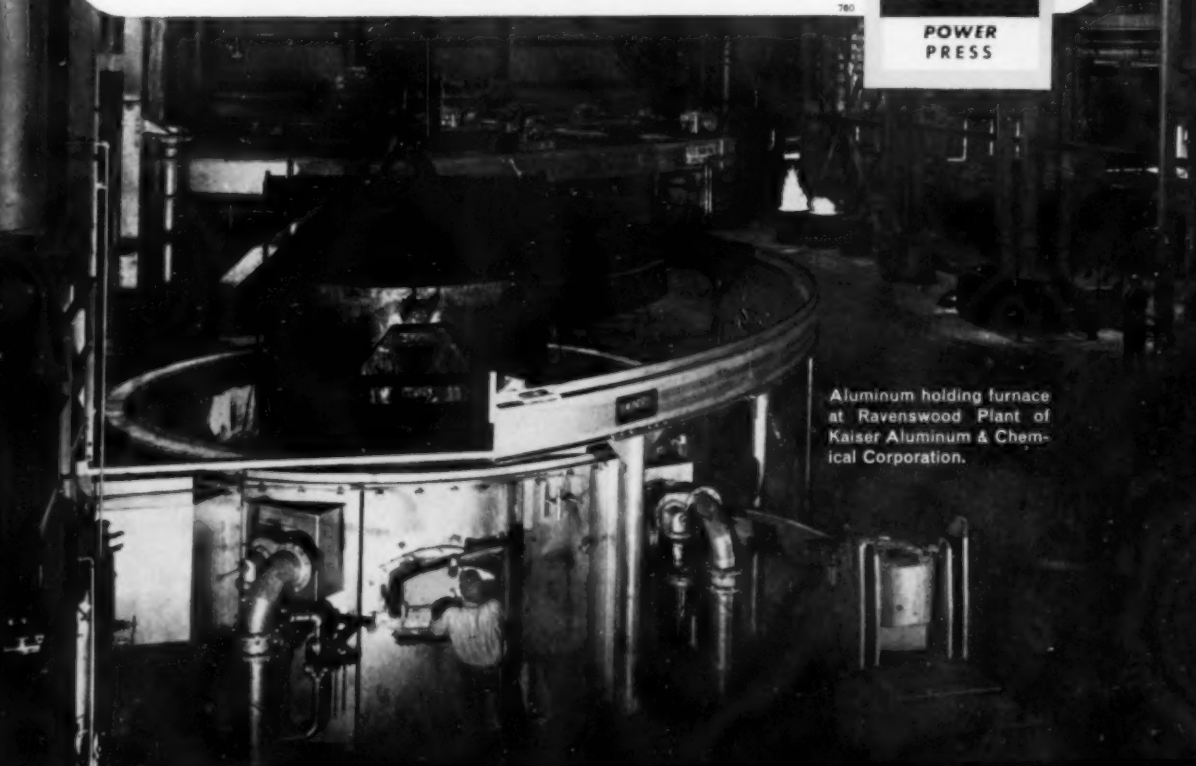
Write for details.

CHISHOLM, BOYD & WHITE COMPANY

A SUBSIDIARY OF WEHR STEEL COMPANY

610 W. 57th STREET
CHICAGO 21, ILL.

BOYD
POWER PRESS



Aluminum holding furnace at Ravenswood Plant of Kaiser Aluminum & Chemical Corporation.

News of the Industry . .

New Brick Plant Opens In North Carolina

The Triangle Brick Co. located near Durham, N. C., recently started operations. The brick company is the State's newest and most modern brick plant with a 540 foot tunnel kiln, longest and with the largest capacity in North Carolina.

Situated on a 68 acre tract, Triangle Brick Plant has 49,000 square feet of covered space. It has a capacity of 30 million brick a year and is designed for ultimate expansion to an annual production of 90 million brick per year.

The company is being operated by James F. Lalanne, Thurman H. Holt and Ted W. Tysinger.

1959-1975 Need Estimated For Sewer Pipe and Fittings

One indication of the tremendous construction potential facing the nation between now and 1975 occurs in the Commerce Department's translation of the present estimates into needs for sewer pipe and fittings.

In a new report in a series aimed at helping manufacturers plan for future demands, the Water and Sewerage Industry and Utilities Division of the Commerce Business and Defense Services Administration, placed at 2 billion feet the quantity of sewer pipe and fittings that will be required for new construction, maintenance and repair between 1959 and 1975. This vast amount will be needed, it said to provide adequate public sewerage facilities during those years.

A study by the Division covered the future requirements of sewer pipe and fittings for public utilities, industrial, military and other Federal systems. Past trends were reviewed. Estimated requirements did not include sewer pipe for transporting industrial fluids other than liquid wastes; house connections to stress mains; culverts, drainage pipe and storm sewers included in street paving construction for which statistics are not available.

The report covered three principal types of pipe for sanitary and storm sewerage collection and disposal—vitrified clay, concrete, and asbestos-cement.

New SCPI Region 5 Director

Colin C. Munro, formerly associated with Structural Clay Products Research Foundation, has been appointed Regional Director of Region 5 Structural Clay Products Institute. Announcement of the appointment was made by SCPI Region 5 President, Winfield Eckley.

Munro, will succeed Ronald S. Ryner, who has resigned to accept an appointment as Executive Secretary of the Construction Specifications Institute.

Munro, who supervised the marketing research function at the Research Foundation, assumed his new duties on July 1 in Chicago, Ill., where SCPI Region 5 headquarters are located at 228 N. La Salle St.

Colin C. Munro

Brick & Tile Industry Wins Five Awards

The brick and tile industry comes through again, winning five awards in the 1960 Building Products Literature Competition, co-sponsored by the American Institute of Architects and The Producers Council.

John L. Haynes (right), Managing Director of The Producers' Council, congratulates John E. Clark, Promotion Director of the Structural Clay Products Institute, on the five Certificates of Merit. Four of the AIA-PC awards were presented to SCPI and one to the Facing Tile Institute. SCPI and its affiliates have won more awards in this annual competition than any other building materials producer.

The purpose of the competition, which this year drew more than four hundred entries in four categories, is to upgrade the quality of building industry literature directed to the architecture and to the consumer. It is open to all manufacturers of building products and materials.

News of the Industry—

Acme Brick Company Announces Expansion Plans

The Acme Brick Company, Fort Worth, Tex., has announced plans for the last half of 1960 and will expend more than $500,000.00 on its plant in Malvern, Arkansas. Neill Boldrick, President of Acme, authorized Martin Borchart, Manager of the Arkansas Division, to announce the immediate expansion plans.

Work has already started on demolition of part of the company's plant at Malvern to clear the way for more modern facilities. Among improved phases of the expanded plans will be a tunnel kiln with an attached dryer, machinery room, clay storage space, and a new building to house the kiln. The improvements will be completed by January, 1961.

Murray Tile Names New Plant Manager

The appointment of William D. Wagner to the position of Plant Manager for the Cloverport, Ky. plant of the Murray Tile Co. has recently been announced by A. J. Blume, Vice President.

Wagner formerly was Chief Ceramic Engineer for Stillwater, (Okla.), Clay Products Co., during which time he also served as Trustee of the National Clay Pipe Research Corp. and was a member of several committees of the Clay Sewer Pipe Association.

Harry C. Plummer

Harry C. Plummer Honored With ASTM Award Of Merit

Harry C. Plummer, Director of Engineering and Technology for the Structural Clay Products Institute, was honored with the Award of Merit of American Society of Testing Materials at the Society's recent annual meeting. He received the Award in recognition of longtime constructive participation in the work of ASTM Building Materials Committees and for promoting the use ASTM standards by architects and engineers.

Plummer has been associated with SCPI continuously since 1937. In addition to his position as Director of Engineering and Technology, he is also Secretary of the Structural Clay Products Research Foundation, research arm of the clay products industry.

American Vitrified Names Salesmen To Serve

The appointment of three new salesmen to service East Coast markets of American Vitrified Products Co., Cleveland, was announced recently by E. L. Miller, President. They are Walter J. McCarthy of Norwell, Mass.; Lester H. Leahy of Dearborn, Mich.; and Richard A. Marfurt of Rockville Centre, N. Y.

The expansion of American Vitrified's sales force was a direct outgrowth of the company's present construction of a $4 million plant, for the production of clay pipe and kindred products, in Somerville, N. J. This clay pipe plant, now under construction, is the first to be built in the East for many years. This expansion of the company's sales force is the first indication of the many new jobs the plant will create.

Obituaries

H. G. Thornton

Harry G. Thornton, 62, Chairman of the Board of Chattahoochie Brick Co., Atlanta, Ga. on July 7, 1960. Thornton was president of the brick firm from 1949 to 1957 when he was named chairman. Survivors include his wife and two sons.

R. L. Ketcham

Robert L. Ketcham, president of O. W. Ketcham, Inc., brick and terra cotta manufacturers of Philadelphia, Pa. on July 12, 1960. Ketcham also was president of the U. S. Pipe Organ Co., director and treasurer of the 20th Century Realty Co., and past treasurer of the Architectural Terra Cotta Institute.

Due to the fact that the printer misplaced this item we are running it now instead of as originally scheduled.

Ben Richards

Ben Howard Richards, 76, general manager and president of Richards Brick Co. since 1904 and a director of the Edwardsville National Bank & Trust Co., died in April in Alton, Ill., where he had been a patient.

Richards, who resided at 746 Hillsboro Ave., was active in various civic affairs and participated in organizing and sustaining promotional organizations in the structural clay products industry in which he was widely known.

SCPRF News Notes

The 49th State, Alaska, now has its first "SCR brick" house. It was constructed last fall in Anchorage by A. D. Wallace, a brick dealer, with Lowell "SCR brick" and 2-in. of Styrofoam as insulation and plaster base.

Bob Taylor, Director of Research, at the request of the National Academy of Sciences and the Ford Foundation, has agreed to head up a Special Advisory Committee of architects and contractors whose job it will be to guide the work in a special study of modular coordination by the Modular Building Standards Association. This project, the funds for which will be provided by the Ford Foundation, will involve a survey of modular dimensioning practices in current use, the evaluation of various modular coordination systems and the preparation of a handbook of recommended modular design procedures.

John Gorin of Lowell Brick and Tile Company, Lowell, Washington, was a recent visitor at the Research Center in Geneva. He reported that his production and sales of "SCR brick"* are steadily increasing.

*Reg. T.M., Pat. Pend., SCPRF

19-yd Scraper effectively self-loads

One Michigan supplies all clay and shale for Webster Brick Co. plant

By putting one Michigan Model 210 Tractor Scraper on their job, officials of Webster Brick Company's Roanoke, Virginia operation, found the savings they were after.

The hills surrounding their plant constitute the mine area. Because loading stations are scattered in 12 different locations throughout these hills, it was formerly considered necessary to use two 9 yd self-propelled scrapers. But now, the Michigan *with 19 yd heaped capacity*, and up to 31.4 mph haul speeds, does the complete job *alone*.

Substantial savings

The need for a second scraper, and the subsequent maintenance and repairs, has been eliminated. Also, a 20% saving in fuel has been realized.

The Michigan runs between the plant and the 12 loading points on haul cycles of ¼ to ¾ of a mile in length. The loaded scraper travels these haul roads in 4th gear at average speeds of 25 mph under normal conditions.

Self-loads shale, frozen clay

In any one pass the Michigan makes, it is likely to encounter seams of shale in varying degrees of hardness. With this in mind, the scraper blade is set to take a one-inch cut over a 300 to 350 ft long strip. The 262 hp engine *driving through a torque converter and power-shift transmission* enables the operator to continue digging through the shale without stopping the machine. The efficient all-Clark power train also helps speed the occasional self-loading which must be done on-the-level and uphill . . . it also helps maintain loading efficiency in winter when material often is frozen solid.

Loads average 15 to 17 cubic yards each

Working like this on a part-time schedule, the Model 210 is loading out 120,000 tons of clay and shale per year. Individual loads, in the predominantly alluvial and plastic clay material, average 15 to 17 cu yds, according to Plant Supt R. M. Bethune.

Michigan Tractor Shovel works inside plant

The Model 210 Scraper dumps material into a hopper which feeds the roll disintegrator. A Model 75A, 1¼ yd Michigan Tractor *Shovel* (left) charges the hammermill, as required, taking the mixed material from a covered stockpile. The Webster plant currently is producing 47 different types of brick and has a kiln capacity of 120,000 bricks per day.

Regardless of *your* production, perhaps Michigans can make *your* job more efficient too. Call us for an early demonstration date. We'll be glad to show you any of the three sizes of Michigan Tractor Scrapers—Model 110 (10½ yd), Model 210 (19 yd), Model 310 (29 yd) . . . or any of the nine Michigan Tractor Shovels (16 cu ft to 6 cu yds).

Michigan is a registered trademark of

CLARK EQUIPMENT COMPANY
Construction Machinery Division

CLARK® EQUIPMENT

2455 Pipestone Road
Benton Harbor 15, Michigan

In Canada:
Canadian Clark, Ltd.
St. Thomas, Ontario

Circle Service No. 23

Refractories News

TRI Fall Meeting To Discuss Depletion

The Fall Membership and Board of Directors Meeting of The Refractories Institute will be held September 15 and 16 at the Broadmoor, Colorado Springs, Colo.

An important part of the program will be a discussion of the impact on the Refractories Industry of the U. S. Supreme Court's Decision in the Cannelton case and the clay depletion provision in the Tax Rate Extension Bill.

R. K. Mack and W. S. Lanier To B & W Refractory Plants Posts

R. K. Mack has been appointed works manager and W. S. Lanier superintendent of The Babcock & Wilcox Company's Augusta, Ga., refractories plant, according to a recent announcement by R. A. Barr, vice president in charge of the company's Refractories division.

Mack, who has been Augusta plant superintendent since 1953, joined B&W in 1937 following graduation from Lafayette College, where he received a BS degree in mechanical engineering. He is a member of the American Management Assn. and the American Refractories Institute.

Lanier, who was assistant plant superintendent prior to assuming his new post, has been with B&W since 1932. A graduate of Georgia Tech, where he was awarded a BS degree in mechanical engineering in 1931, he is a member of the American Ceramic Society.

High Interest in Refractories at Iron and Steel Convention

The increasing importance of refractories in the production of basic steel is highlighted by the fact that no less than eight technical papers will be presented on related subjects at the 1960 Iron & Steel Exposition.

To be held in Cleveland Auditorium, September 27 through 30, the event will include a series of Technical Sessions as well as exhibits by many leading manufacturers in the field.

Porter Begins $4 Million Refractory Expansion Program

H. K. Porter Co., Inc., Pittsburgh, announced the start of a $4 million construction and equipment modernization program at the Bessemer, Ala. and Wellsville, Ohio plants of its Refractories Division. Major items in the program will include two new tunnel kilns at Wellsville and one new tunel kiln as Bessemer.

Site preparation work has already begun, with soil testing and survey work completed. Construction of buildings began last month. Erection of the tunnel kilns by Swindell-Dressler Corporation is to start within 90 days at both locations.

The modernization and expansion steps, C. L. Holbert, Porter President said, are geared to meet modern steelmaking practices, and will increase the Division's refractory brick production, provide new products and improve product quality through more accurate quality control and better manufacturing techniques.

Almost $2 million is being spent at Bessemer, Alabama Works, where plans call for a new factory building and storage facilities, a tunnel kiln, dryers, and new brick-making facilities. These additional facilities will make possible a marked increase in the capacity of Bessemer Works to produce ladle brick, and enable this facility to produce added lines of fire clay refractories for Southern industry.

R. P. Stuntz, L. D. Christie, Jr. Named to Sales Posts

New York—R. P. Stuntz has been named manager of field sales and L. D. Christie, Jr. named product manager, technical sales, of The Babcock & Wilcox Company's Refractories division, it was announced recently by R. A. Barr vice president in charge of the division.

Stuntz, formerly assistant sales manager, will assume direction of the division's district sales personnel, agents, distributors and dealers.

Christie, who was previously assistant to the division's technical director, will program and direct field testing and evaluation of new products and provide technical services to field sales personnel. Both men will report to M. J. Terman, Refractories division sales manager.

R. C. Conover

Conover New General Works Manager of Refr. Div.

R. C. Conover was recently named General Works Manager, Refractories Division, H. K. Porter Company, Inc.

Conover was previously Western District Works Manager for the Porter Refractories Division. In his new position he will supervise operations of the division's 15 refractories plants, located in Alabama, Ohio, Colorado, Pennsylvania, Missouri, Illinois, Connecticut and Mississippi.

Conover has spent his entire career in the heavy clay products and refractories industries. As General Works Manager for Porter, he will operate from the division's Pittsburgh headquarters.

Norton Company Announces New Appointments

Norton Company of Worcester, Mass., recently announced two new appointments in its grinding wheel field sales force, effective July 1st.

J. Robert Lowry, a Pittsburgh native and graduate of the University of Pittsburgh, is now a Field Engineer in the company's Atlanta, Ga., district.

Robert D. Stubblebine of Worcester, a Cornell University graduate, has been named a Field Engineer in Norton Company's Detroit, Mich., district. Both joined the company as sales trainees last year.

At Clay City Pipe Company, Uhrichsville, Ohio, plant labor, using plant equipment, mixed and placed tops for 5 cars in 4 hours, with refractory concrete made with LUMNITE calcium-aluminate cement.

Refractory concrete car tops place easier...cost less...last longer

Cast in place or precast, car tops of refractory concrete made with LUMNITE calcium-aluminate cement offer both longer service and economy.

Refractory concrete tops resist the soaking heat of kilns with little or no spalling or cracking, and the concrete's low volume change means that tops stay level, minimizing car wrecks.

Installation can be just as easy as shown above, and economical as well, since plant labor and equipment can be used. After placing, concrete reaches service strength within 24 hours. For extra convenience, castables containing LUMNITE cement are available from leading manufacturers of refractories. These packaged mixtures are ready for use with just the addition of water and mixing. For more information, write Universal Atlas Cement, 100 Park Avenue, New York 17, New York.

"USS," "Atlas" and "Lumnite" are registered trademarks

L-211

Universal Atlas Cement
Division of
United States Steel

Offices: Albany · Birmingham · Boston · Chicago · Dayton · Kansas City · Milwaukee · Minneapolis · New York · Philadelphia · Pittsburgh · St. Louis · Waco

Circle Service No. 31

TRADE NEWS

Engineered Ceramics Adds Two

Engineered Ceramics Manufacturing Company, Chicago, manufacturers of refractory specialties, announces the appointment of John McKane as Sales Manager and Ken Weber as assistant Sales Manager. McKane will be in charge of all sales domestic and foreign. He has had extensive experience in the application and sales of all types of refractories, with particular emphasis on super-refractories.

Ken Weber, named Assistant Sales Manager, has 12 years experience in field engineering and public relations work.

Bell Minerals Company Exploring Clay Deposits

Exploration in Maine is a continuing process at Bell Minerals Co. in West Paris, Maine, but the big news is the addition of new Diamond drilling equipment to handle their enlarged program of prospecting. This exploration serves many purposes; to develop new deposits; to permit the expansion of reserves; and give needed information in known and partially proven deposits.

Heads W. S. Tyler Central District

Ralph W. Ramer has been appointed Manager of the Central District for The W. S. Tyler Company, replacing James W. Sullivan, who has been transferred to the Company's headquarters in Cleveland, it was announced by Albert E. Reed, Vice President-Marketing. Ramer will be located at the company's new offices for the Woven Screen and Screening Machinery Divisions at 200 South Michigan Avenue, Chicago 4, Illinois, and will direct sales of these Tyler products in Illinois, Missouri, Kansas, Oklahoma, Arkansas, and southeastern Wisconsin.

J. H. McLeroy, Jr.

Solite Names McLeroy Manager

James H. McLeroy, Jr., has been appointed manager of the Solite Silica Division of the Solite Corporation, Richmond, Va., it was announced by A. Cabell Ford, sales director for the corporation.

He joined the Solite Corporation in 1959, having previously been with a Virginia concern, where he served as Petersburg manager and later as Richmond sales supervisor.

The Solite Corporation are producers of Solite lightweight aggregate, for use in Solite lightweight masonry units and lightweight structural concrete. Through wholly owned subsidiaries, the corporation operates plants and offices in Virginia, North Carolina and Florida.

Lyle Holmes To American Nepheline Corporation

The appointment of Lyle A. Holmes, as Manager of U. S. sales for American Nepheline Corporation, Columbus, Ohio, has been announced by H. R. Deeth, Vice President, Marketing. Holmes has been Sales Engineer for Great Lakes Foundry Sand Company, the former U. S. Sales Agents for American Nepheline Ltd.

He is a member of both the American and Canadian Ceramic Societies.

Pennsylvania Crusher Div. Appoints New District Rep.

George O. Thompson has been named District Sales Representative, St. Louis territory, for the Pennsylvania Crusher Division, Bath Iron Works Corp., West Chester, Pa., it was announced recently by H. J. Douglas, General Manager of the Division.

Thompson has been with Pennsylvania Crusher Division since 1957 as a Sales Engineer in the Philadelphia area.

American Truck & Body Names Officers

Carl H. Bach, Jr. has been named Vice President—Sales for American Truck Body Company, Martinsville, Virginia, according to Carl H. Bach, Sr., President.

Other appointments announced by the board of directors of American Truck Body Company are: William W. Tatum, Vice President—Manufacturing; James J. Mongrain, Director of Research; Arthur B. Koger, Shop Superintendent; and Charles B. Howard, Assistant Secretary and Assistant Treasurer.

American Truck Body Company, manufacturers of materials handling equipment, produce the Pack-Hauler, Blox-Hauler and other units used in the brick and block industry.

Leeds & Northrup Chairman Retires

C. Reed Cary, Chairman of the Board of Leeds & Northrup Co., retired as an employee of the company recently after 53 years of service, but will continue to serve on the board.

Born in Baltimore, Cary joined Leeds & Northrup as a sales engineer in 1907. He was Vice-President of Marketing, Vice-President of Personnal Relations and Senior Vice-President before becoming Chairman in 1959. He participated in the growth of his company from 50 people to more than 3,000, and from the production of laboratory instruments to a leading position in the production of industrial recorders, automatic controllers and process control systems.

Minute Money Makers

A practical and quick description of some ideas that may save you much needed time in your operation.

BRICK & CLAY will pay $10 for each Minute Money Maker published. Send yours to B&CR, 5 S. Wabash Ave., Chicago 3, Ill.

Pre-Grinding Clay Before Storage

A shredder on the end of a Steele No. 50 straight line pug mill is in use at the Crumpler Brick and Tile Company, Roseboro, North Carolina. As the clay is brought in it is dumped to a feeder which feeds the pug mill. A belt conveyor takes the pre-shreded material to a covered stockpile. Advantages of pre-shredding the clay before stockpiling include: the faster drying of the clay in the pile; a more uniform distribution of moisture in the stored clay; and a more uniform blending of the various clays from the clay pit.

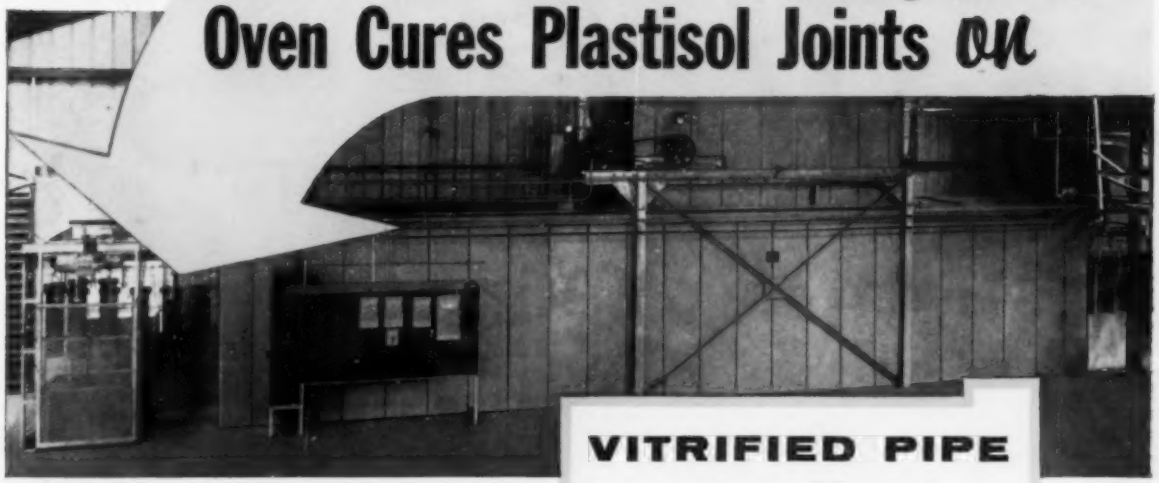
Keeping Belt Conveyors Clean

Spiral-type conveyor idlers are in use at Belden Brick Company, Sugar Creek, Ohio, to keep all their conveyor belts clean from sticking clays and shales. As the belt slides over the idlers, the spiral action of the idlers sweeps all the sticking clay from the under side of the conveyors. The idlers not only eliminate the use of artificial heat on the conveyors, but also help in maintaining a cleaner plant.

Automotive Transmission Regulates Crusher Speeds

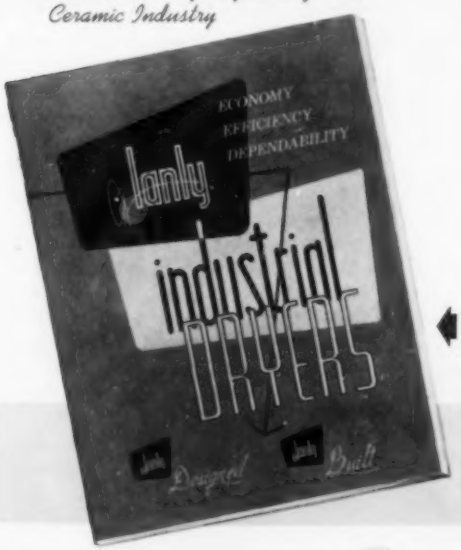
At the plant of the McMinnville Brick Company, McMinnville, Oregon, an automotive-type transmission between the electric motor and the gear drive of an Eagle double roll clay crusher is used to vary the speed at which the rolls in the crushers turn. The changing of speeds controls the amount of material passing through the crusher. In this manner the plant operators can keep the double roll clay crusher co-ordinated with the grinding and other reduction equipment in the circuit.

This 2 Pass LANLY Conveyorized Oven Cures Plastisol Joints on



VITRIFIED PIPE

Heat Processing Engineers for the Ceramic Industry



The plastic material is applied to the preheated pipe after it leaves the first pass of the oven and is cured in the second pass.

The rapidly expanding production of vitrified pipe with plastisol joints is being greatly expedited by the installation of LANLY ovens in various plants throughout the country manufacturing this product.

NEW BULLETIN 572
Covering Refractory, Sanitary Ware and Vari-Purpose Dryers is yours for the asking.

Manufacturers Using LANLY Equipment for Preheating Clay Pipe and Curing Plastisol Pipe Joint Compound.

American Vitrified Products Co. • Clay City Pipe Co. • W. S. Dickey Clay Co. • Gladding, McBean & Co.
Evans Pipe Co. • Graff-Kittanning Clay Products Co. • Larson Clay Pipe Co. • Logan Clay Products Co.
Ozanne Clay Products Co. • Pomona Terra-Cotta Co. • Robinson Clay Products Co. • Stillwater Clay Products Co.
Streator Drain Tile Co. • Superior Clay Corp. • Tillotson Refractories Co. • Utah Fire Clay Co.

Find Your Nearest Dealer In The Yellow Pages

THE lanly CO.

CERAMIC OVENS & DRYERS
2800 Euclid Avenue • Cleveland 15, Ohio

THE LANLY CO.
CERAMIC OVENS & DRYERS
2800 Euclid Ave., Cleveland 15, Ohio

Name_____

Company_____

Street_____

City_____ State_____

Atlanta, Georgia • Birmingham, Ala. • Boston, Mass. • Chicago, Ill. • Cleveland, Ohio
Columbia, So. Carolina • Columbus, Ohio • Detroit, Mich. • Houston, Texas
Pittsburgh, Pa. • Rochester, N. Y. • San Francisco, Calif. • St. Louis, Mo.

Circle Service No. 35

Experience is Key to Profitable Haydite Production

by NEAL F. MOHLER
Technical Editor

This story is the second in a series on manufacturers of lightweight aggregate who produce aggregate with rotary kilns. Back in 1943, the Carter-Waters Corp. of Kansas City, Mo. leased the original plant of Stephen Hayde, patenter of the Haydite process and builder of the very first plant for producing lightweight aggregate.

Operating the plant at the same location until the supply of shale was exhausted, the plant operators gained valuable experience in the manufacture of lightweight aggregate and in 1947 made this experience pay off when they designed and built a new plant. Within two years after the new two-kiln plant was built, demand far outstripped supply and in 1950, two more kilns were added to the plant to double the company's production. Today the plant is not only supplying local needs, but is shipping aggregate as far north as Minneapolis, Minn. Omaha, Nebr. and just recently erected a new plant in Centerville, Ia. to take care of the distant requirements. The Iowa operation will be reported in a future issue of BRICK & CLAY RECORD.

Platte County, Mo. with the fine shales that the area possesses is the location of the four-kiln lightweight aggregate producing plant of the Carter-Waters Corp. of Kansas City. From the first Haydite producing plant in the United States, this company has built the four-kiln plant at New Market, Mo., and just recently completed another plant in Iowa, to meet the distant requirements for lightweight aggregate.

The discovery of Haydite is believed to have been more or less accidental. Stephen Hayde was aware of the swelling or bloating frequently found in the manufacture of brick. When the bloating of the brick was attributed to the expansion of the shale in the brick clay, Hayde recognized the possibilities and began experimenting as early as 1904, although it was not till 1913 that a patent was obtained on the manufacturing process. Actually the shale in these bloated brick was going through the same basic changes which take place in today's manufacturing process.

The first exploration of Haydite aggregate of any consequence was the construction of Haydite concrete ships during World War I. The first commercial application of the aggregate for more conventional building was in 1922, with the first Haydite blocks manufactured in 1923.

The original Haydite plant was capable of annually producing aggregate having a value of about 170 thousand dollars. The industry has now grown to where some 30 odd plants throughout the country, representing an investment of probably 12 million dollars, are capable of producing approximately eight million dollars worth of aggregate per year. Haydite plants are now stretched across the United States from New York to California, and are shipping aggregate to foreign and domestic markets all over the world.

The Carter-Waters Corp. entered the Haydite picture is 1943 when they leased the old original haydite plant. They operated that plant until 1948, which was also the year that the present Missouri plant began operations.

The plant is located at New Market, Missouri, 35 miles north of Kansas City and about 20 miles south of St. Joseph. In addition to being centrally located with respect to the company's market area, the site affords excellent highway and rail transportation. The plant site and the deposit, which were acquired by outright purchase encompass an area of 110 acres. The raw material is a laminated shale and is located adjacent to the site of the plant.

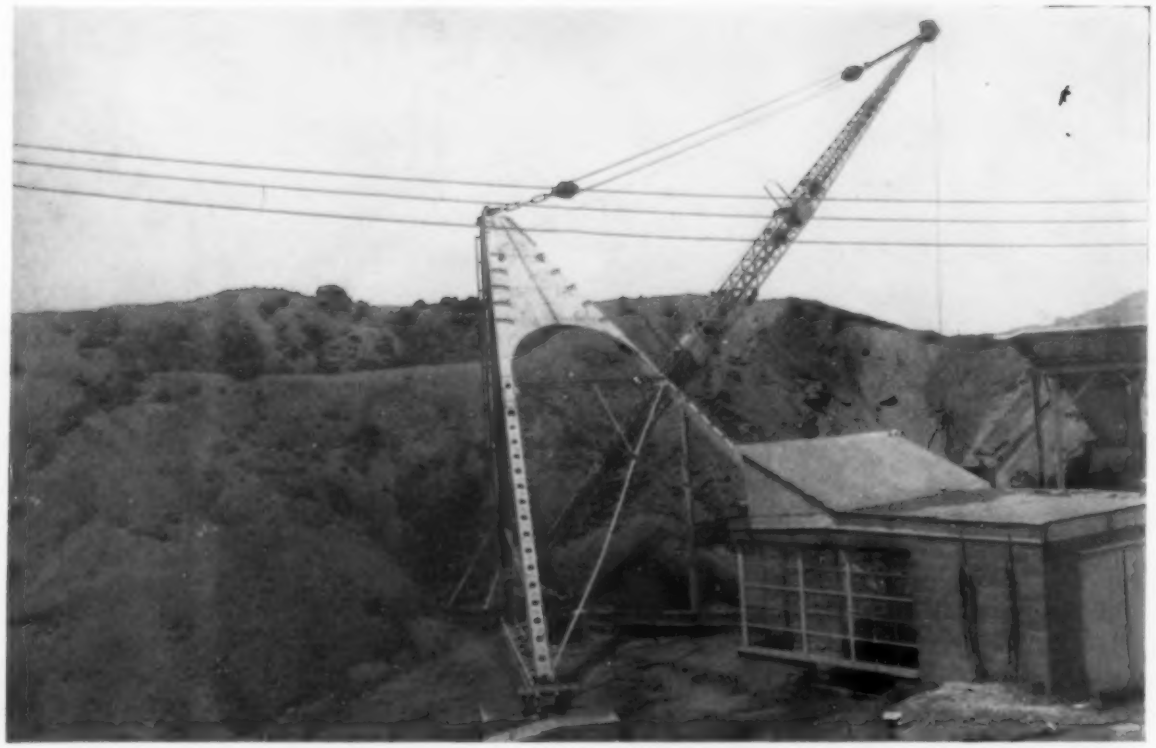
Preliminary excavation of the shale is done with a ripper attachment

Continued on page 42

Four rotary kilns at Carter-Waters Corp. produce 500-yds of aggregate daily.

A Caterpillar ripper attached to a D-8 tractor loosens shale from the deposit.

Storage silos for finished aggregate are made of lightweight concrete.



Handling of hot clinker to crushing equipment is done with American Hoist & Derrick Co. stiff-leg derrick.

Continued from page 40

to a D-8 Caterpillar bulldozer. After sufficient quantity of shale is ripped from the pit, the ripper is detached from the dozer which then piles the shale into windrows suitable for digging with a power shovel. A Koehring #304 shovel with a ¾ yd. bucket loads the shale into a 10-ton Dart off-the-road truck which hauls the shale either into a covered storage area or directly to the primary crusher, and thence into covered storage.

Install Clay Crushers

In place of the conventional dry pans used in most clay crushing operations, Carter-Waters, after extensive investigation, decided to install Eagle Iron Works shale crushers for both primary and secondary crushing. A Cedar Rapids apron feeder provides an even feed to the primary crusher which is an Eagle Senior Double roll crusher. From the double roll crusher, the material is sent over a scalping screen. The fines are conveyed directly to two storage silos, while the oversize from the screens are sent to the secondary crusher, an Eagle Standard double roll crusher, which reduces the material to a maximum 2″ size. The material from the secondary crusher is then conveyed with the fines from the scalping screens to the same two silos for storage.

Each of the Haydite concrete silos has a capacity of about 800 cu. yards of ground material. Two kilns are fed from each silo by splitting the flow from each silo into two streams. On the silo feeding the two original kilns, variable speed reciprocating feeders discharge the shale at a constant rate onto conveyors which discharge the material into bucket elevators carrying the material to steel chutes feeding two of the kilns. The two latest kilns are fed from the second silo by apron feeders.

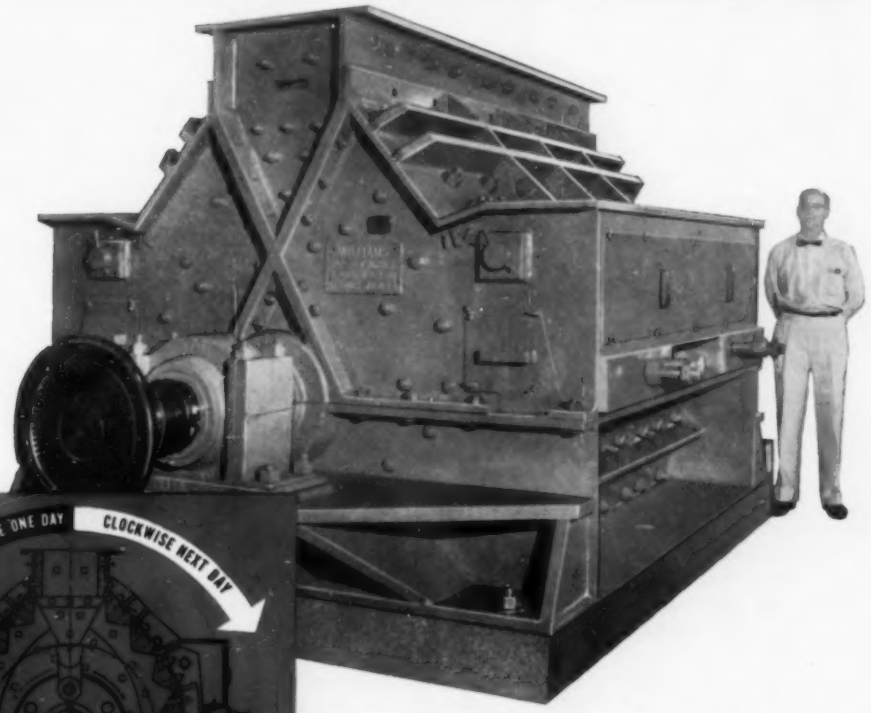
Utilizing four 6 ft. by 60 ft. rotary kilns, the company is producing 500 yards of burned aggregate per 24-hour day. Each kiln is lined with a six-in. refractory lining and is driven by a 25-HP variable speed electric motor. The rpm of the kilns can be altered between 1¼ and 2½. Natural gas is currently being used by the company with a No. 6 oil standby system. Average gas consumption per cubic yard of aggregate ranges between 3000 and 3500 cubic feet of gas.

Moisture Driven off

Kiln temperatures range from about 1000°F. at the stack (or input) to 2200 or 2300° in the hot zone, which is 12 to 15 feet from the discharge end. In the preliminary heating stage, part of the moisture in the shale is driven off but a portion remains to prevent the material from baking before it is subjected to the near fusing temperature in the hot zone of the kiln. As the maximum temperature is approached the argillaceous material present becomes plastic and forms a surface coating on the particles. The fusing clay is simultaneously blown full of small cells by the expansion of gases generated in the decomposition of certain of the compounds present. The individual particles are thus expanded or bloated to several times their original size, attaining in the process the rough surface character so desirable in con-

Continued on page 67

More efficient CRUSHING AT LOWEST COST for labor, power and upkeep with WILLIAMS REVERSIBLE IMPACTOR



REVERSIBLE ROTATION prolongs parts life without manual adjustment. A simple reversing switch on motor does it.

INTERIOR VIEW of small Impactor shows typical rugged hammers, impact blocks and liners made of manganese steel and other alloys. Rotor removable without disturbing feed or other mechanisms.

For secondary crushing, the economy and high production of a Williams Reversible Impactor is unequalled, whether raw material is hard and abrasive or soft and friable. Precision control of specified top-size is easy, usually in a closed circuit system, from a coarse 2" with minimum fines, down to 35 mesh or finer.

The Impactor has no grates. Material fed into the mill is reduced to proper size while rebounding between the whirling hammers and impact blocks, until discharged from bottom opening. Grinding or rubbing action is eliminated—power, replacement parts and downtime are reduced to a minimum. No fine adjustments need be maintained.

Reversible rotation is a prime feature of the Williams. So is *Wide Open Accessibility* to interior. So are the *Interchangeable Impact Blocks* to balance wear. So are the many other exclusives that hold cost-per-ton to the very lowest. There is a size and model for your exact needs. *Write for catalog.*

WILLIAMS PATENT CRUSHER AND PULVERIZER CO.
2709 N. Broadway • St. Louis 6, Mo.

WILLIAMS
CRUSHERS GRINDERS SHREDDERS
Oldest and largest manufacturers of hammer mills in the world

Circle Service No. 36

This is a most unusual plant, in that, it makes brick by the old hand molding methods and at the same time produce the most uniform machine made tunnel kiln fired product. The beauty of the hand made brick in shapes, colors and firing treatment is as outstanding as the precision of the machine product. Complicated arches for the eastern market are prefabricated with great care—as a work of sculpture.

A Caterpillar Traxcavator feeds clay processing equipment and doing the preliminary mixing.

Locher Brick Spans Processing

Four hundred and twenty-five tons of handmade Virginia brick are being shipped half-way around the world to be used in the construction of United States Embassy buildings in Canberra, Australia.

The fourth generation of Lochers in Glasgow, Va., are in charge of making the genuine handmade, oversize brick, according to C. H. Locher, 3rd. Sizes are 8½″ x 2⅝″ x 3⅞″. The brick are a selected red range of color to match existing buildings and have a colonial sand finish. One hundred thirty thousand regular brick are involved in the order, plus 5,000 special shapes.

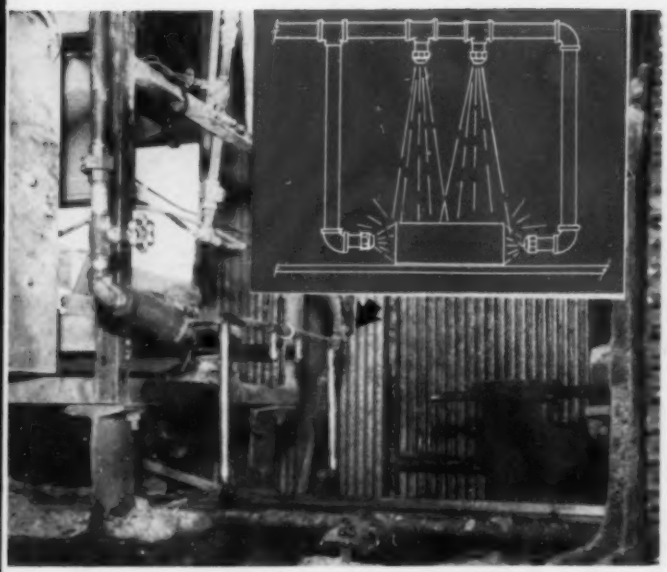
This is not just an isolated incident but a frequent occurrence. Locher handmade brick are literally shipped all over the world as well as into every corner of the United States.

The demand for Locher brick is understandable, for the colors are unique and are not duplicated elsewhere. The combination of a red clay, a buff clay and eight different colored sands are the ingredients of the Locher handmade brick and shapes.

The versatility of the Lochers is reflected in the plant production, for besides the fine line of handmade brick, the company produces a machine mold soft mud brick and a stiff mud brick. The variation in

The kiln is equipped with North American burners and fans and Robinson blowers.

Machine time is saved by unloading tunnel kiln cars with a Bickerstaff fork mounted on a Clark truck.



System of water spraying of column.

Storage Hopper and Link-Belt apron feeder control clay feed to pug mill.

From Handmade to Modern Stiff Mud

products demands variation in firing too. Stiff mud brick are tunnel kiln fired, soft mud and handmade are periodic kiln fired. A further variation is practiced with fuels. Gas, coal and wood are used to produce the necessary colors.

The red burning clay which is the base for all the brick, is mined about eight miles from the plant and hauled to the plant via trucks. A rather extensive stock of the red clay is maintained both under roof and in the open at the plant site. The clay is a surface clay and mined with a dragline.

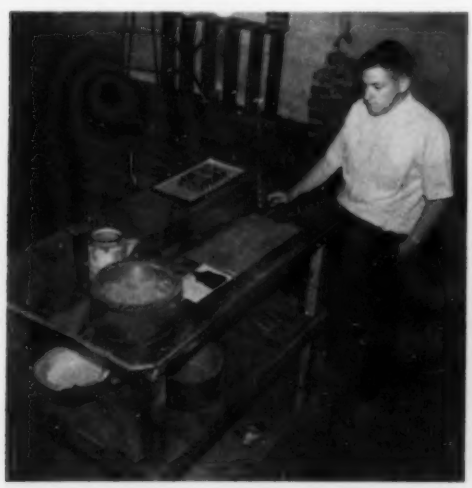
The buff clay is also a surface clay and mined with a drag line. This is the best method because of the clay deposit formation. The moist condition of the area and the depth of the clay make the drag line an efficient machine for mining.

Both clay deposits are extensive and enough clay has been prospected to last for a half century or more.

It is important to properly mix the clays from each of the mines so that a uniform product results. The first mixing, therefore, occurs when clay is removed from the plant stock pile to the grinding machinery. A drag line operates on the open stock piles. As it drags the load, the bucket is skimmed over a long area to accomplish the first mix.

Continued on page 46

Geo. Locher in sample room.



Forms are used in prefabricating arches. A Clipper saw cuts the brick to shape.

Continued from page 45

Under the shed roof, a front end loader also selects clay in such a way that further mixing is accomplished.

The stockpile under roof is the surge storage. The clay actually comes from the mines to outdoor stock via trucks. Then from outdoor stock to shed stock via truck.

Rolls Are Grinding Media

The clays are dumped into a small hopper and fed from the hopper by feeders to the operating equipment. The clay passes through a set of smooth rolls for grinding after passing through conical rolls for stone removal.

The grinding operation is complicated by the necessity of delivering clays to three separate operations, stiff mud, soft mud and handmade lines. This is accomplished by utilizing a reversible belt drive.

All clay drops from the conical rolls onto an elevator belt which is the key reversible drive. When stiff mud is being made a clay called for by the stiff mud line, the elevator belt is reversed and carries the clay downward to the cross belt which in turn takes the clay to the stiff mud systems.

When soft mud or hand molded brick are made, the elevator belt moves the clay up to the soft mud pug mill. This mill prepares clay for both operations. It is from the pugging here that further separation is made, dividing delivery to hand made or soft mud lines.

As the clay comes from the conical rolls and heads for the soft mud line, it is subjected to a set of smooth rolls for further grinding. From this set of smooth rolls it passes through two pug mills where it is properly tempered for processing into handmade or soft mud brick. Each takes a different water content and the water is added manually by an operator thoroughly familiar with the muds.

A few examples of hand-made brick shapes for Colonial and Southern Colonial architecture.

20,000 Hand Made Per Day

Since the pugging operation is on the upper floor, it is possible to feed the prepared clay to the hand molders by gravity. The hand molders are located directly below the pugging line. Six crews of three men each are able to produce 20,000 hand made brick per day. The molds are made of wood and each mold turns two brick at a time.

Eight different kinds of sands are used on the brick at this point to produce variations in color. The sands are gray, white, red, black, tan and of different mesh sizes too. The mold boxes are sanded before the clay is placed into the boxes. The sand comes from North Carolina, South Carolina, Virginia, and Pennsylvania.

Waste Heat is Utilized in Drying

The handmade brick are dumped on pallets which are then racked on dryer cars. The cars pass through a tunnel dryer which has 16 tracks. Waste heat from the periodic kilns is used to heat the dryers. A gas fired auxilliary burner is used part of the time to supplement the waste heat.

Soft Mud is Part Time Operation

The pug mills also feed the soft mud machine. This machine can produce up to 6000 brick per hour but it is only operated a portion of each day. The Lochers are not emphasizing this line in their promotion which holds its demand down.

Discharge end of 399 foot Harrop tunnel kiln where stiff brick are made.

A Koehring drag line loading white clay.

M. G. Seigler, Supt. and Geo. Locher, V. P. inspecting brick from tunnel kiln.

H. H. Downey, left, with 43 years service and 41 years as superintendent is now responsible for firing the delicate hand made shapes in periodics. The Clark truck and Roura dumper are main cleanup tools.

These brick are also treated with all the different sands as in the case of the handmade brick. The formed brick are placed on pallets and the pallets racked on dryer cars and dried through the same tunnel dryer.

These brick as well as the handmade brick are fired in periodic kilns.

An unusual belt conveyor is used to convey brick loaded pallets from the soft mud machine to the dryer car loaders. Instead of the wire rope usually seen, this conveyor is made of 3″ strips of belting. Two such strips operate one on each side of the conveyor. The pallets rest on these belts, laying across the conveyor so that one belt is under each end of the pallet.

Coal, Gas, Wood Fire Periodics

The soft mud and handmade brick are fired through eleven periodic kilns. Nine of them are round downdraft, two are rectangular downdraft.

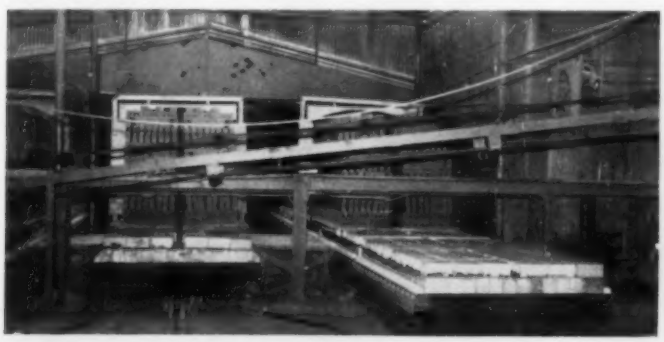
Half of the kilns are fitted with gas burning equipment while the remainder are coal fired. This difference in fuel is important since different reds and flashes are produced with the different fuels. One small rectangular kiln is used particularly to produce the handmade frosted brick and the handmade glazed headers. These are possible only with wood as a fuel. Much work has been done on the possibility of producing these specials with other fuels and synthetically but without success.

Special Shapes are Important

With handmade brick and the type of architecture supplied by Locher, a great deal of the brick is produced in special hand cut and molded shapes. Special pavers, arch brick, decorations, water ledges, coves, corners and scores of others constantly pass through the factory.

A special department devotes its efforts to the shapes. Complete doorways are made. These are carefully layed out in the factory and shipped so that their installation is identical brick for brick. Every arch is layed out the same way. Saws and diamond wheels do the cutting.

Tunnel kilns cars are loaded on three tracks. Cartops are both Paco and Green Co.



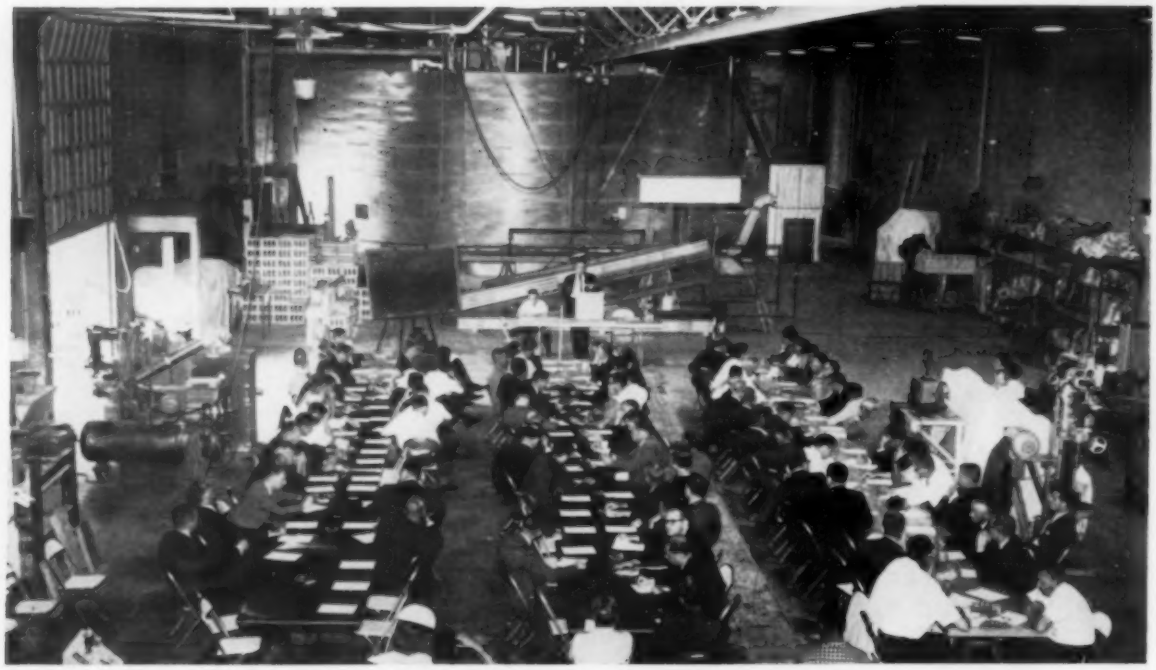
Handmade to be Promoted

It is the plan of Charles Locher III to expand and further develop the handmade division and the special shape department. He believes that with the great variety of colors and the pleasing results from hand molding, the architect will have a better medium to work with and one which he will use extensively if assured a supply.

Completely rebuilt in 1958, the stiff mud line is new and extremely efficient. It is housed in an all metal building and contains new pug mill, brick machine, sand blast and tunnel kiln and dryer. All brick handling is by lift trucks and brick forks.

After the clay leaves the original conical rolls, it is put to a dual clay preparation process before stiff mud brick making. The clay passes through a disintegrator and another set of smooth rolls. At this point it is necessary at times to add dried clay to the line because the clay from stock is too wet to use in the stiff mud

Continued on page 59



Overall view of recent SCRP meeting at Geneva, Illinois.

SCPRF Launches Second Ten Years

First ten years acclaimed as very successful by Frisk. Hazelton Brick Co. joins the Research Foundation. New floor unit to be used in urban renewal homes.

A. C. Frisk, (President of Goodwin Companies) and Chairman of the Structural Clay Products Research Foundation opened the Mid-Year Annual Membership Meeting of SCPRF at Geneva, Illinois, on June 23. His first act was to award Roy A. Shipley, Natco President, and past Chairman of SCPRF, a certificate for meritorious service to the Foundation and the clay industry.

In his opening remarks, Mr. Frisk traced the history of the Research Foundation and the close ties it has with the Structural Clay Products Institute. After ten years of research activity, he said the Foundation can look to substantial accomplishments in the past and a bright future of contributions to the industry. He attributed gains in current brick and tile markets to current and past research results aimed at keeping brick costs at competitive levels. Research, too, has provided information for the industry's promotion and advertising copy.

He then welcomed Hugh Campbell, President of the Hazelton (Pennsylvania) Brick Company as a new member of the Research Foundation.

Taylor Reviews Objectives

In his introduction and general summary of research results, Bob Taylor, SCPRF Director, restated the objectives of SCPRF's program, (1) to study and improve end use requirements for clay products, (2) to develop new clay products, and (3) to devote research time to plant and product manufacturing techniques. He cited illustrative examples of SCPRF contributions to the industry under all three of these objectives.

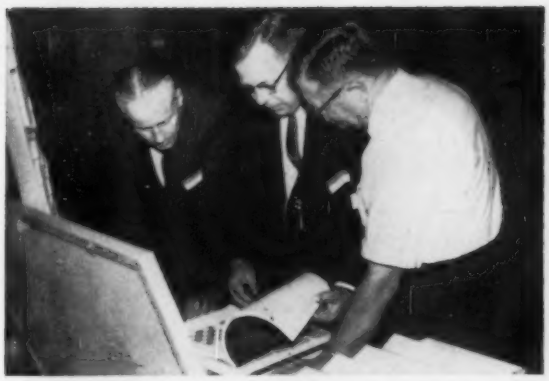
He then previewed the program for the next two days of meetings.

"SCR masonry process"* is Taking Hold

Mal Allen reviewed the present status of the "SCR masonry process" promotion program. 1959, he said, was devoted primarily to additional clinics and demonstrations in all principal areas of the country. A training program was especially developed for SCPI Regional Engineers, manufacturer sales personnel and contractors. Much time was also devoted by SCPRF staff field men to job assistance and field work with contractors. This training program has developed salesmen for the "process" in 18 different regions of the

*Reg. T.M., Pat. Pend., SCPRF

Comparing business notes are Frank C. Cheney, Merry Bros. B&T; Claude F. Weisman, West Va. Brick Co., and Kenneth H. Merry Jr., of Merry Bros.



Floyd M. Burdick, BRICK AND CLAY RECORD; A. Cecil Frisk, and Chuck Bridgeman of Des Moines Clay Products.

country. It has also demonstrated that the "process" can be a sales tool for selling clay products by aiding in the lower in-the-wall cost of masonry.

"SCR masonry process" Creates Business and Work

Colin Munro, SCPRF market research specialist, checked on the long term effectiveness of the masonry process by surveying its merits in Milwaukee, Wisconsin, where it has been employed for some 6 years. He found that more than 72% of the mason contractors use the "process" in the residential field. Milwaukee in 1953 also was a declining brick market. The use of the process has stabilized the brick market and markedly increased the use of brick. The market research data in Milwaukee was compared with similar statistics for Rockford, Illinois, where no contractor uses the "process." At the present time in Milwaukee, masonry house construction costs only $400-500 more than frame construction while in Rockford masonry houses cost $1,000-1,500 more per residence.

In 1952 bricklaying costs in Milwaukee were approximately $125 per thousand and today it is $100 per thousand. In Rockford in 1952, the cost of bricklaying was $90-100 per thousand while today it ranges from $110 to $120 per thousand. In both cities there have been wage increases over this period of time of nearly 30%, but despite this, the greater productivity of the masonry process in Milwaukee has permitted the cost of bricklaying to be lowered.

The "process" has also increased the available work for the mason and the mason contractor. In Milwaukee the percentage of brick homes has increased 100% over 1952 while in Rockford it is up only 40%. In Milwaukee this means that brick houses now are 60% of the total market while in Rockford brick has only 35% of the house market. All of this data indicates that the "process" can be a good sales tool for the clay industry as it increases productivity, permits lower in-the-wall costs and thus puts brick within the reach of many more potential customers.

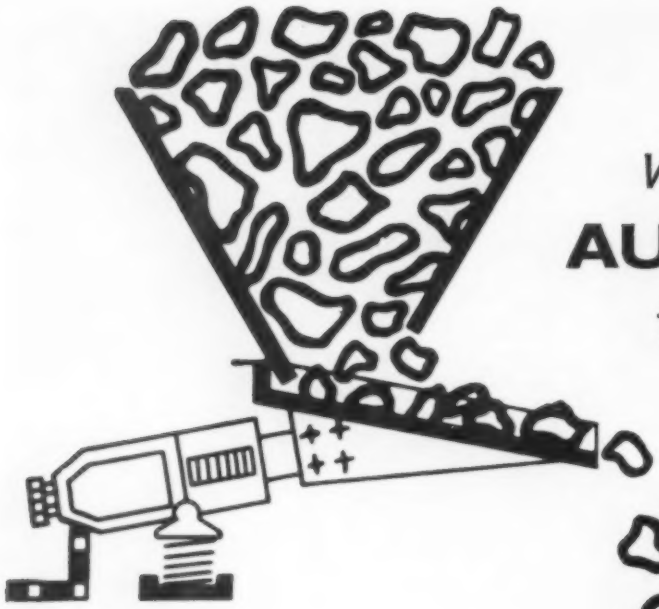
Moisture Expansion Resolved

Clar Monk reviewed research progress in panelized masonry. The basic fabrication problems and erection problems for the "SCR building panel"* of the current design are essentially completed and the Foundation has successfully, through a mason contractor, bid and been awarded a fine commercial panelized

Continued on page 51

Paul Belden Jr., President of SCPI, (Belden Brick Co.) and J. R. Roudebush, Johnson Clay Works, Inc.

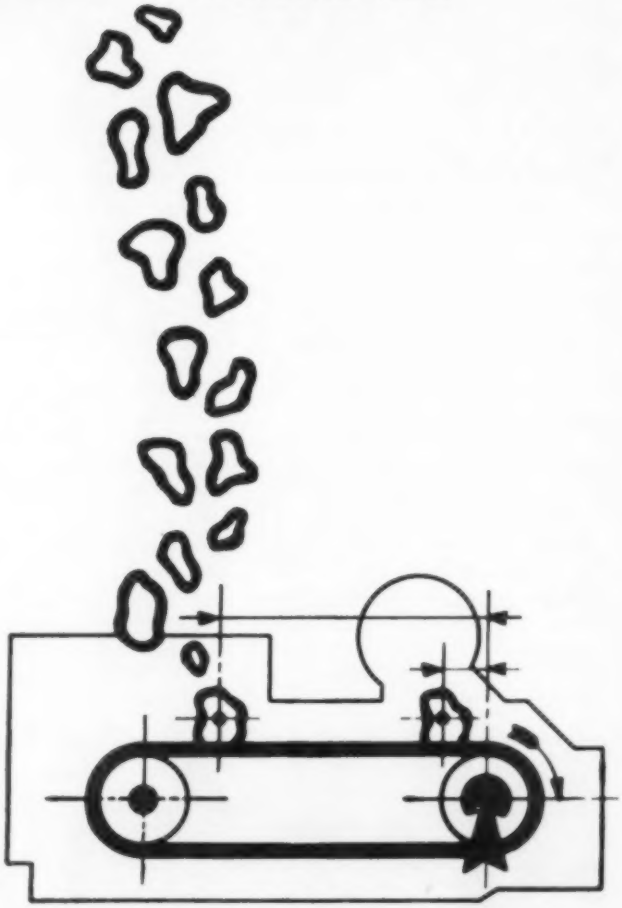
David H. Lower, Bethlehem Tile Co.; Clarence G. Lower, of the same company, and Otto J. Buehler, Fairfield Brick Co.



When you're planning

AUTOMATION...

there's a JEFFREY feeder to control material flow



JEFFREY ELECTRIC VIBRATING FEEDERS are capable of handling most classes of materials and of meeting all flow requirements—a few pounds or many tons per hour. Feeders can be operated on the level, up- or down-grade, and rate of feed can be changed at will while the unit is running. Various styles of decks can be furnished, to suit materials handled and operating conditions.

Many manufacturers include Jeffrey vibrating feeders to maintain a flow of materials into and away from the machinery they are building.

JEFFREY WAYTROL® CONSTANT WEIGHT FEEDERS are often designed into a system where bulk materials must be fed to a process at a definite rate, or where proportioning is handled automatically. The Jeffrey Waytrol is an accurate, rugged unit for weight-metering materials. Separate feeding components are supplied to meet individual requirements; vibrating feeders, spiral or belt conveyors.

Waytrols range in capacities from 60 pounds per hour to 750 tons per hour. Tell us the capacity you need, the character of the material you plan to handle, and Jeffrey engineers will recommend the feeding layout you need.

For Catalog 941 describing Jeffrey equipment for the process industry, write The Jeffrey Manufacturing Company, 916 North Fourth Street, Columbus 16, Ohio.

JEFFREY

CONVEYING • PROCESSING • MINING EQUIPMENT
...TRANSMISSION MACHINERY...CONTRACT MANUFACTURING

Circle Service No. 37

SCPRF Launches . . .

Continued from page 49

Joe Stryker, SCPI; Chuck Bridgeman, Des Moines Clay Co., and Clar Monk of SCPRF.

Cecil Frisk, chairman of SCPRF, presents award of merit to past chairman Roy Shipley, Natco.

job in Chicago. Fabrication of the panels and construction of this job will begin later in the summer.

In addition, SCPRF has retained a consulting architect to advise it on how the clay units within the "SCR building panel" can be improved from an aesthetic point of view to improve its design and use possibilities. New textured types of units have been recommended by the consultant and a new method of casting such textured panels is being developed.

Paul Johnson summarized the Foundation's work on moisture expansion and stated that this work has proved that the often proposed autoclave test is not a reliable test for predicting potential moisture expansion in clay products. This research work has been helpful in preventing the inclusion of adverse restrictions in the Washington, D. C., code.

A series of fundamental durability studies have been started to study cracking and other product defects that occasionally occur in clay bodies.

Bob Taylor also described the "SCR acoustile"* development which is now in production in one plant and soon will be in another. The new forms of "SCR acoustile" have 65% sound absorption in both a random pattern and a rectangular pattern. The sound transmission loss for walls built of "SCR acoustile" is 46 decibels without plaster on the back side and 53 decibels with plaster on the back. Metropolitan Brick, Inc., Canton, Ohio, has developed a method of punching the holes in the tile and will share, for a nominal fee, their know-how in punching with other members of the industry licensed to produce "SCR acoustile." Fire test ratings on "SCR acoustile" have been determined to be one hour in a 4-inch wall.

*Reg. U.S. Pat. Off., Pat. Pend., SCPRF

A New Cavity Wall

A new concept of cavity wall construction was discussed by Clar Monk. He reviewed the industry's past data and tests on various types of cavity walls with various types of cavity insulation and revealed that the Foundation is currently evaluating the possibility of foaming the cavity full of polyurethane plastic. Fire tests are currently being made. If successful, this foamed in place insulation may eliminate the necessity for wall ties in cavity wall construction and would provide unusually low U factors while retaining the high thermal heat capacity of cavity walls.

New Mortar Additive Is Studied

Clar Monk also discussed past and current mortar research. He described certain additives to standard cement mortars which appear to markedly increase their bond strength. Certain saran latex compounds appear to promise bond strengths in the neighborhood of 800-900 psi without sensitivity to moisture. He showed the audience how such increased bond strengths might permit the construction of much higher walls for a given wall thickness and permit unreinforced masonry walls in some structural applications to develop lateral strengths as high as 720 lbs. per square foot. It might also be possible to increase the L over D ratio for masonry to as much as 40 or more.

• • •

For the latest of what's happening at the Research Center see "SCPRF News Notes" in our News Section.

Art Frenchman, and Jim Stansfield of Streator Brick Co., and Art Stone of Malvern B&T.

you get more fines...

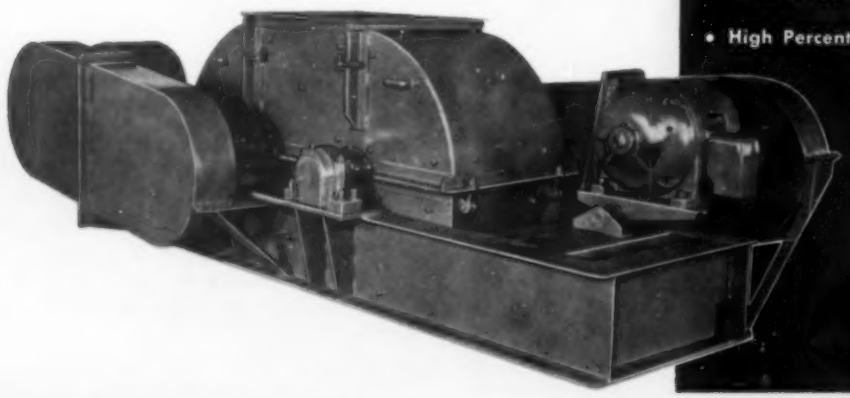
with Miller Double Rotor Hammermills

Miller Double Rotor Hammermills give up to 100 tons per hour of minus 8 mesh material. Miller Hammermills can be used for primary reducing — secondary reducing — tailing reducing — or they can perform any combination of reducing jobs. You get BONUS PULVERIZATION because you can depend on Miller's Double Rotor Hammermills for rugged trouble free service.

Have Miller engineers test run a sample of your material — you'll agree you get more and better fines with Miller Double Rotor Hammermills.

Call or write Miller for information on any engineering problem.

- Replaceable Special Alloy Hammers and Tips
- Precision Balancing
- Bonus Pulverization
- 50 and 100 Ton Capacity
- High Percentage of Fines



Miller Equipment Company

P. O. Box 1566 • Phone ME 3-3541 • Salisbury, N. C.

Pacific Agent:
WALTER C. STOLL & SONS
5028 Alhambra Avenue
Los Angeles 32, California

Circle Service No. 38

Hardy advocates national advertising
Fuel is growing cost problem
Court Decision affects Industry

Aggregate Manufacturers Study Clay Block

The midyear meeting of the Expanded Clay and Shale Association was held at the Dearborn (Mich.) Inn July 8-9. R. G. Hardy (Onondaga Brick Corp.) presided at the meeting.

In his report to the Association, Executive Secretary, T. R. Berger stated that, "with respect to your Association affairs, this has been a year of steady growth. We were pleased to welcome into the ranks of our producer-members as of March 1 the Western division of Illinois Brick Company, and to add to our Board of Directors this new member's representative in the person of Mr. Clyde Stewart. We have reason to believe that our producer roster will chalk up additional gains before the current year is completed. We also added several additional associate members following our annual meeting in January, so that our year to date has been marked by encouraging membership activity."

Dave Grove, Shalite Corp., S. F. Wise and Jack Mead, Lightweight Agg. Corp.

Supreme Court Ruling

"One development of significant interest to our industry was the decision of the United States Supreme Court on June 27 in favor of the Government in the Cannelton Sewer Pipe Co. case. This ruling held that percentage depletion should be based on the value of raw fire clay and shale rather than on finished products such as sewer pipe. The ruling will affect depletion allowances for many years in taxable years prior to 1961. It appears that the Supreme Court kept its ruling narrow enough to avoid any effect on depletion allowances for minerals such as coal, but it seems likely at this writing that our lightweight aggregate industry may come under the impact of the Supreme Court decision because of our closeness to the basic product involved in this case. It points up the urgent need of remedial legislative action by Congress to remedy this situation and underscores the importance, too, of bringing the most sincere persuasion to bear through the combined strength of our Association and others having a mutual interest in this subject."

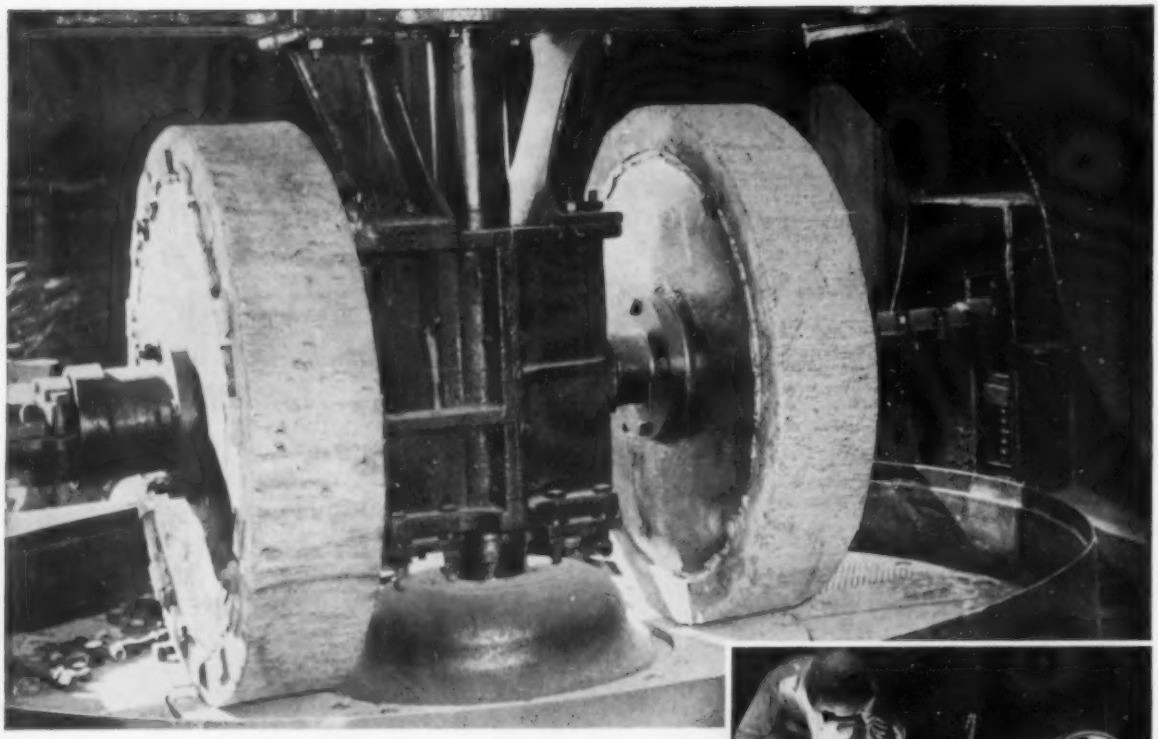
Fuel Is Scarce

Lee H. Allen, Hickman, Williams & Co., Inc., talked on the "Selection of

Continued on page 55

Mel Cruzen, L. W. Agg. Corp., and Ron Hardy, Onodaga Brick Co.

T. R. Berger and L. F. Pfeifferberger of ESCA.



MULLER TIRES *are manually hard-faced with Stoody 21 or Coated Tube Stoodite. For semi-automatic application on muller tires or plows (shown above) use Stoody 100 or Stoody 121. Hard-faced muller tires wear far more uniformly, resist cupping, hence pulverize material quicker. Service life is often tripled on each application.*

Like to *double* or *triple* service life of *Muller Tires and Plows*?

Stoody Hard-Facing Alloys are doing it every day!

Operators everywhere are slashing maintenance and replacement costs on clay processing equipment by protecting wearing surfaces with Stoody Hard-Facing Alloys! Applications are easily made by welding manually, or—for greater speed—with either semi-automatic or fully automatic welding methods.

When hard-facing deposits are worn away, equipment can be reclaimed several times, extending useful life indefinitely!

Savings in replacement costs alone are considerable but, in addition, *you avoid expensive shutdowns and lost production!* Because parts retain size longer, operating efficiency is equally prolonged with more uniform output during equipment life.

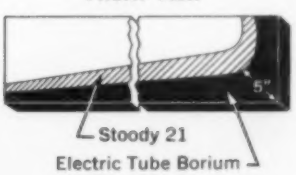
FOR FULL DETAILS ON HARD-FACING MULLER TIRES AND PLOWS and other commonly used equipment in clay plants write for free Stoody Guidebook. It tells where to apply hard-facing deposits and which Stoody alloys to use for best results.

STOODY COMPANY

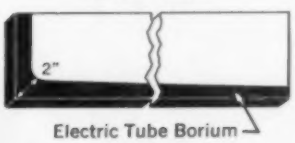
11950 East Slauson Avenue • Whittier, California

Circle Service No. 39

FRONT VIEW



BACK VIEW



MULLER PLOWS *receive extreme protection against abrasive wear by coating front face with a layer of Stoody 21. This is followed on both front and back faces as well as on bottom and outer edge with an overlay of Electric Tube Borium.*

Continued from page 53

Sintering Fuels". Fuel he said is the largest single cost item in manufacturing sinters. Coke and anthracite fines are generally used. As long as these were by-products of steel and coal, the cost was low. Now since sintering is an important process, the fuel costs have risen. This year 4 to 6,000,000 tons of fuel will be used which is far beyond the by-product stage.

Any substitute fuel must perform well and have a high fixed carbon content. There are several substitutes used and being considered. Bituminus coal when fixed carbon is high, performs well. Stoker coke is satisfactory because volatiles are fired out. Low temperature coke (Char) is less desirable because of more volatiles. Petroleum coke is good but high priced. The poorer grades contain sulphur. Fluid coking high, higher sulphur contents. Lignite is high moisture and high volatile contents. Municipal Sewage has great possibilities.

Karl Nensewitz, Besser Technical School, Alpena, Mich., explained how their school operates for the benefit of all industries and covered some of the projects now under way. He went into the work they are doing on the light weight clay block and covered its possibilities.

Study Aggregate Properties

L. E. Pfeiffenberger, Technical Consultant for ECSA covered his ac-

Continued on page 56

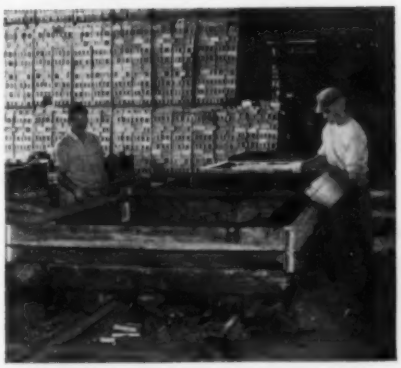
Changes of Address

If you're due to change your address, be sure to avoid missing an issue of B&CR. Please notify us of your new address at least six weeks in advance of moving date. Write: BRICK & CLAY RECORD, 5 South Wabash Ave. Chicago 3, Ill. Be sure to give both old and new address, zone number, and your name.

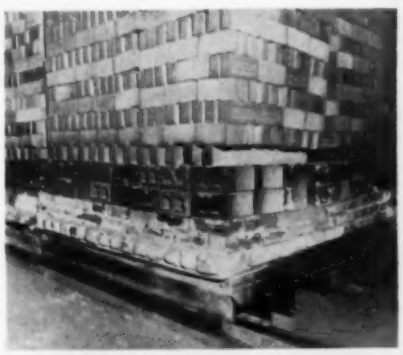
300% INCREASE IN CAR TOP LIFE

Completed car top showing monolithic Moldit Pier block sections. Elimination of firebrick joints increases car top life — prevents expansion of car top and resultant jamming of cars in kiln.

MOLDIT PIER CASTABLE REFRACTORY replaces car top firebrick at prominent eastern brick plant



Pouring Moldit Pier Castable into simple wooden forms set on car top.



Worn and eroded car top firebrick after only 6 months service. Replacement of broken firebrick is a tedious, expensive job. New Moldit Pier block sections are easily removed and a new section poured quickly.

R&D

REFRACTORY & INSULATION CORP.

128 WALL STREET • NEW YORK 5, N. Y.

Sales Offices: Chicago, Ill.; Cleveland, Ohio; Bryn Mawr, Pa.; Newark, N. J.; Buffalo, N. Y.

Manufacturers of Castable and Bonding Refractories; FURNACE BLOK; Blankets, Block, Plastic and Fill Insulations.

Circle Service No. 40

NOW

'Buffalo' Type CR Fan for rugged service handling abrasive loadings

TROUBLE-FREE SERVICE ON YOUR MOST SEVERE AIR HANDLING APPLICATIONS!

'BUFFALO' BUILDS A VARIETY OF SPECIALIZED FANS to handle heavy dust loadings and high temperature gases that would destroy ordinary fans in a hurry! Here are some examples:

15,000 CFM at 360° — A 'BUFFALO' TUBE-PROPELLER FAN installed between the inner and outer walls of a kiln. Motor outside air stream, driving fan by V-belt through fairings.

MOVING AIR AT 1600°F. — A 'BUFFALO' TYPE NV PROPELLER FAN with water-cooled bearings and shaft heat slinger, in the refractory field.

HANDLING MATERIALS AND HOT GAS with minimum maintenance — 'Buffalo' Industrial Exhausters.

HANDLING CORROSIVE FUMES — 'Buffalo' Rubber-Lined Exhausters outlast ordinary fans 3 to 12 times.

NAME YOUR TOUGH AIR PROBLEM. Write us the details. Our Engineering Department will give you the logical answer in the light of our 83 years' experience in air handling — either with one of the many types of fans in our line, or with an engineered adaptation of proven worth. The results are certain to be — trouble-free performance!

"Buffalo"

AIR HANDLING DIVISION
BUFFALO FORGE COMPANY
Buffalo, New York
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

'Buffalo' Air Handling Equipment to move, heat, cool, dehumidify and clean air and other gases.

'Buffalo' Centrifugal Pumps to handle most liquids and slurries under a variety of conditions.

Circle Service No. 41

Continued from page 55

tivities with ACI Committees and ASTM Committees. ACI is establishing an elasticity ratio (relation of density to strength) and is working on measuring shrinkage. It too is attempting to evaluate aggregate without going through concrete. ASTM is attempting to determine tests of modulus of elasticity and are also working on creep.

He emphasized that all tests must be recorded completely so that results can be duplicated.

Lightweight Clay Block Important

B. K. Powers, Virginia Lightweight Aggregate Co., Roanoke, Va., conducted a session on developments in and for lightweight aggregate.

In placing a charge on the sintering machine, is a swinging spout best? Or by a shuttle distributor? It was agreed that the spout feed was less desirable.

Jim Gleason, Barber Green Co. and Frank Leftwich, Sayre & Fisher Brick Co.

Fred A. Babson, Shalite Corp., and Bill Karl, Lightweight Agg. Corp.

He touched upon top fuel size which it was agreed should be ¼ or less with not too many fines.

Discussing clay bonded units, he said they hold a great possibility for this industry. Brick men must be taught how to make units before they will become customers of the aggregate industry.

He referred to several tests on lightweight concrete in road tests which is proving very successful especially as bridge decks.

Melvin G. Cruzen, Light Weight Aggregate Corp., Livonia, Mich., related how he sells his product. He had the aid of his advertising agency.

In the windup, Ron Hardy advocated national advertising to sell the idea of light weight and how it can save money.

Depletion Questions Answered

As a result of the article on the depletion decision in the July issue of BRICK & CLAY RECORD, we have had many letters and phone calls which asked two questions,

(1) How will I come out on it?

(2) What should I do now?

Answering the second question first, there is nothing the individual can do except to wait for the Internal Revenue Dept. to announce its interpretation of the law which is due December 31.

A letter written to the editor answers question number one in part:

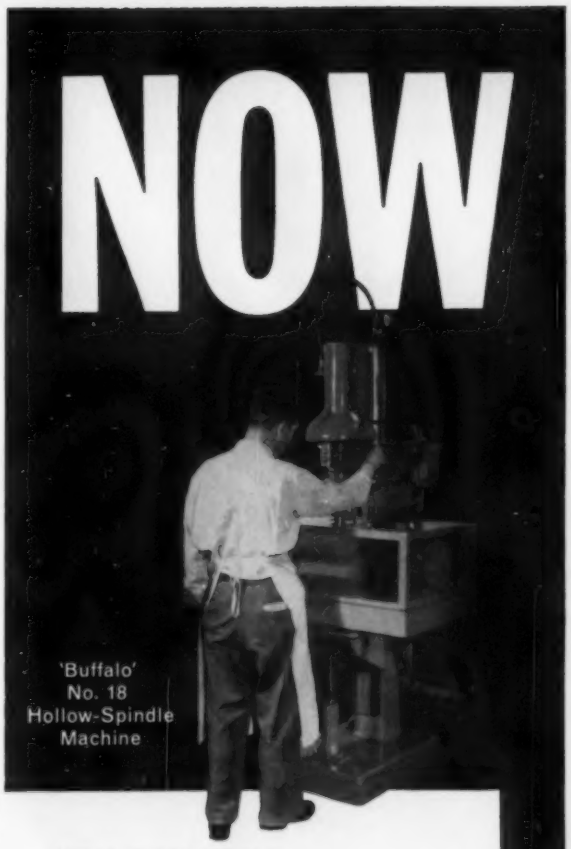
"Federal income tax returns for the majority of taxpayers in the clay industry are open for several years and may be subject to deficiency assessments based upon the Supreme Court's decision. Should the Treasury insist upon settlements for prior open years under an interpretation of the High Court's decision which would limit the allowance to a pug mill cut-off point basis for computing the allowable depletion or a market value of clay at some isolated pit, it would work a great financial hardship on many taxpayers, no doubt bankruptcy or insolvency in some cases. This belated decision by the Supreme Court is grossly unfair, when taxpayers were led to believe that the many lower court decisions correctly interpreted the statute, and especially since the high Court, several years back, denied certiorari in the Merry Brothers and other cases. Many projects now in the planning stage involving expansion and modernization to meet the needs of our growing economy will be abandoned or indefinitely deferred."

One interesting comment in a letter was as follows:

"As you know, I have long felt that any decision in the Cannelton Case would not necessarily be decisive as far as the Refractories Industry is concerned. There are broad points of difference not only in qualities of the clay but in the uses and markets."

Coming Next Month

No, you're not seeing things. The above picture is a glimpse of one of the most unusual plants in the industry. Next month BRICK AND CLAY RECORD will editorially take its readers through this unique operation. Also featured will be a complete section on the latest products in Auto-Clay-Mation, plus a 75th anniversary salute to one of the leading clay pipe manufacturers in the nation. These stories are but a few of the highlights awaiting our readers in the September issue of BRICK AND CLAY RECORD.



YOU CAN DRILL SUPER-HARD MATERIALS AT PRODUCTION SPEED!

NEW 'BUFFALO' HOLLOW SPINDLE DRILLING MACHINES make this possible. Using a hollow diamond core bit, you can now drill ceramics, glass, zac block, marble, granite and fused cast refractory block at formerly "impossible" speeds.

OTHER ADVANTAGES ARE LONGER BIT LIFE PLUS WORK QUALITY which often eliminates the need for further finishing operations. This speed and accuracy are provided by the following quality features in 'Buffalo' Hollow-Spindle Drills:

- **Hollow spindle and transfer unit directing flush-coolant water into the work area.**
- **Rugged, extremely rigid 3-$1\frac{5}{10}$" column.**
- **Speeds to 10,000 RPM.**
- **Large work capacity — 36" dia. circle.**
- **Convenient head adjustment by rack gear integral with column.**
- **Table with screw adjustment.**
- **Models in one to six spindles.**

INVESTIGATE this profitable new way of drilling and machining ceramics — ask your 'Buffalo' Machine Tool Representative for all the details or write us direct.

MACHINE TOOL DIVISION
BUFFALO FORGE COMPANY
Buffalo, New York
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

ESTABLISHED 1878 "Buffalo" MEMBER N.M.T.B.A.

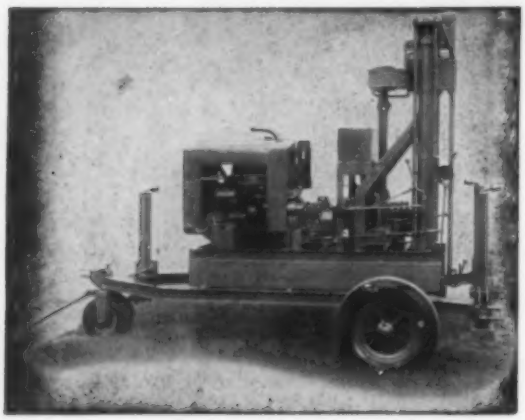
'Buffalo' Machine Tools to drill, punch, shear, bend, slit, notch and cope for production or plant maintenance.

Squier Machinery to process sugar cane, coffee and rice. Special processing machinery for chemicals.

IN MINUTES . . . INSTEAD OF DAYS

Samples obtained from depths up to 100 feet with the all new

Parmanco



Model HV-172
Hydraulic Vertical Drill

- HEAVY DUTY
- FOUR SPEED AUGER
- FINGER TIP CONTROL
- 65 H. P. MOTOR
- ALL DRIVES MOUNTED ON TIMKEN ROLLER BEARINGS

RUGGED COMPACT EASY TO OPERATE

●

THREE LEVELING JACKS TO INSURE STRAIGHT HOLES. FIELD PROVED

Complete Information on Request

SPECIALISTS IN AUGER TYPE DRILLS

PARIS MANUFACTURING COMPANY

PARIS, ILLINOIS

Circle Service No. 42

How to keep a

clean screen

when sizing sticky materials

LINK-BELT ALONE heats screens with a "series" arrangement requiring fewer cables, lower initial cost . . . providing less power loss, more even heating. Above, each of five "UP" screen cloths is connected to 12-kva transformer.

Electrically-heated cloth enables LINK-BELT "UP" vibrating screen to deliver its full capacity

HERE's a screen delivering high-velocity action that's unsurpassed for fast, accurate sizing. And to guard that efficiency against blinding by sticky or hygroscopic fines, Link-Belt offers a superior electric screen-heating arrangement. Among its advantages:

GREATER OUTPUT. Open mesh may boost capacity as much as 50%. Downtime for cloth cleaning and replacement is eliminated.

BETTER, MORE UNIFORM PRODUCT. Clear cloth provides more accurate sizing.

LONGER CLOTH LIFE. No whipping due to material accumulation.

LABOR SAVINGS. Ends mechanical cleaning.

Write your Link-Belt office for Book 2777 containing full data on "UP" screens.

LINK-BELT

VIBRATING SCREENS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Sales Offices in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14.528

Circle Service No. 43

Continued from page 47

process. Dry reject brick are ground for this purpose.

A surge bin for storage is used here before feeding to pug mill. The apron feeder is controlled by the pug mill operator.

Brick Made Modern

The clay receives good mixing and tempering in the pug mill. In extruding brick, a vacuum puger is in operation.

Three additions to the brick making process are used here which adds to the perfection of the product. As soon as the column of clay emerges from the die, the column is finely scored which gives the sand a better surface to adhere to. It was further found that by slightly wetting the scored surface, a still better adherence is possible. To accomplish this, the brick (after cutting) pass an area where fine oil mist sprays, spray water on the brick. The mist is so fine that considerable trouble was experienced by plugging of the spray nozzles. A screen installed in the water line ahead of the nozzles solved the clogging problem. Finally, the brick pass through a sand blast where the colored sands are embedded into the surface.

The off bearers are located above the kiln cars which pass under the off bearing belt and at right angles.

Tunnel Kiln 399' Long

The brick are stacked directly on tunnel kiln cars which pass through the 399-ft. gas fired tunnel kiln. Extra burners are located at the end of the firing zone for reducing purposes. The car setting is such that all brick can be handled with a brick fork and lift truck.

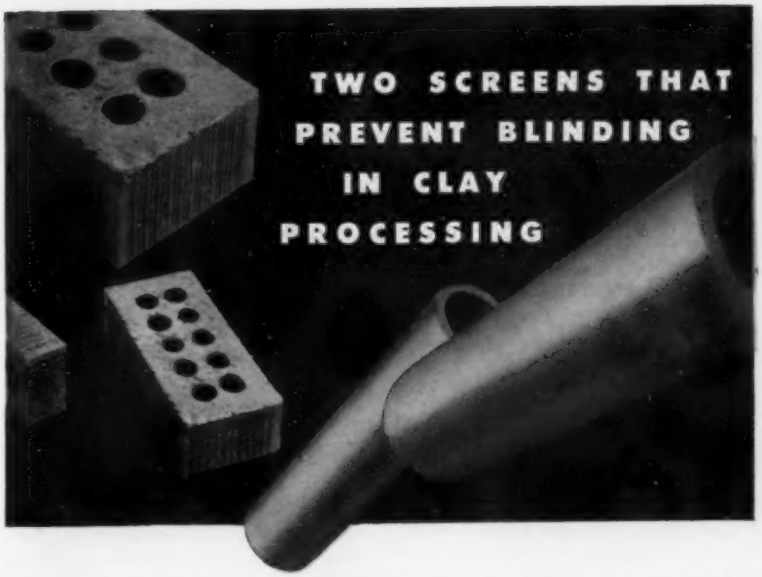
The lift trucks are operated with L.P. gas.

Locher is Old Manufacturer

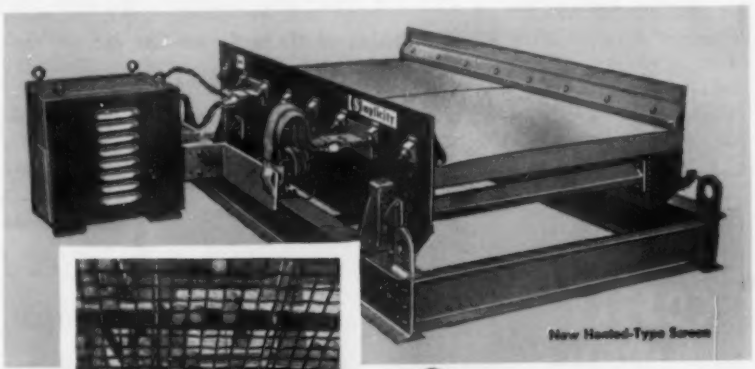
The Locher family established a cement plant in the area in 1848 and operated it continuously to 1916. In this year Charles Locher converted to stiff mud brick making. A nephew, Charles Locher II came to operate the plant in 1919 and was its head to 1956.

Handmade brick had its beginning in the plant in 1927 and soft mud was added in 1929.

Continued on page 70



SIMPLICITY'S NEW HEATED-TYPE AND BALL-TYPE


New Heated-Type Screen

Underneath view of Ball Tray Deck

One of the greatest clay screening problems is that of blinding . . . the severe impairment of production by sticky, moist clay clogging the holes in the screen.

Where square openings are less than 5/32"; Simplicity Screens embody electrical heating. The screen wire is heated to approximately 140°, which prevents blinding, but does NOT DRY THE BED OF THE MATERIAL. This makes possible operation of the heating elements for only about 45c per hour. High-amperage, low-voltage current presents no safety hazard.

This new heated screen features an improved method of heat distribution, and easier screen cloth replacement—none of the heating elements are disturbed when changing cloth. Elimination of screen cloth whip results in longer cloth life.

Where screening needs require screen cloth with square openings of 5/32" or over, Simplicity Ball Tray Screens employ bouncing rubber balls, trapped between the screen cloth and a retaining cloth. Vibration of the screen agitates the rubber balls, which knocks clay loose from the wires . . . no matter how wet the clay may be. Eliminate your clay screening problems permanently with Simplicity Heated or Ball-Type Screens. Both types have proven their economy and dependability in tough applications throughout the country.

For all details on these screens and other Simplicity conveying, screening or feeding equipment, write us today.

204

Simplicity
TRADE MARK REGISTERED

ENGINEERING CO. • DURAND 16, MICHIGAN

SALES REPRESENTATIVES IN ALL PARTS OF THE U. S. A. • FOR CANADA: Simplicity Materials Handling Limited, Guelph, Ontario. • FOR EXPORT: Brown and Sites, 50 Church St., New York 7, N. Y.

Circle Service No. 44

- **Fluorspar**
- **Magnetite**
- **Chromite**
- **Manganese**

We have recently built a completely modern plant in Brownsville, Texas, to process minerals for the brick trade to size and high chemical specifications. Custom grinding facilities are available.

This plant means more efficient service and, as a shipping point for other NP & M products, quicker delivery for our customers in the West and Southwest. It represents another step in our expansion program designed to meet the increasing demand for our wider range of products. Those listed here are all immediately available and will be milled to your requirements.

Our consistent growth over the past 65 years is a measure of the personal service you may expect from us as well as the quality of our products.

NATIONAL — ALWAYS UNIFORM — ESTABLISHED 1904

CONTRIBUTING ASSOCIATE SCPI

NATIONAL PAINT & MANGANESE COMPANY

A division of Howe Sound Co., Inc.

Lynchburg, Virginia

Circle Service No. 52

AVOID COSTLY INJURIES

LONG-WEARING TUFHORSE MITTENS AND PADS GIVE EXTRA PROTECTION

Tufhorse KANT-RIP

DES MOINES GLOVE & MFG. CO.
Des Moines, Iowa

Increase the output of your men by protecting their hands with famous Tufhorse gloves, hand pads or mittens. Made of most durable leather available. Split cowhide, Tufhorse Kant-Rips are always flexible and comfortable to wear.

Please help me to avoid costly hand injuries! Send me samples of:
Glove No. G-9 ($18.50 per dozen pairs)
Mitten No. 300 ($14.40 per dozen pairs)
Hand Pad No. 308 ($8.40 per dozen pairs)
(All F.O.B. Des Moines)

Name_____
Firm_____
Address_____
City_____
State_____

Sample Gloves at per dozen prices

Circle Service No. 53

Get Better Production and Lower Costs with

UNIVERSAL HEATED SCREENS

Universal Screens with the efficient Unilec heating jacket are a screening combination that get results with the toughest materials. You can not only eliminate blinding, but screen finer—and at far lower cost per square foot of screening area!

Write Dept. "BC" For Free Literature on Screens & Screening

UNIVERSAL VIBRATING SCREEN COMPANY

1745 Deane Blvd. • Racine, Wis.

Quality Screens Since 1919

Circle Service No. 54

Hoppers Reduce Waste Handling Costs 50 Per Cent at Texas Brick Plant

A problem which plagues most brick and tile manufacturers—the inefficiency and resulting high cost of waste handling and yard clean-up—has been solved at the Bennett, Texas, plant of Acme Brick Company.

Acme has reduced its clean-up costs 50 per cent by replacing wheelbarrows with self-dumping hoppers which are used for collecting and transporting broken, chipped or off-shade brick and tile.

The Bennett plant, first of Acme Brick's 19 manufacturing operations, was founded in 1891 but has been modernized and expanded through the years. Present facilities include twenty-four kilns and thirty-three drying tracks. Some 200 different sizes, shapes and colors of brick and tile are made at the plant.

Prior to the purchase of self-dumping hoppers, the brick shader would throw "bats" (reject brick or tile into a wheelbarrow. When it became full, a laborer wheeled it to a central dump.

While the wheelbarrow was being emptied, the shader continued sorting, tossing bats into a pile to be shoveled into a wheelbarrow later.

A similar clean-up method was used around the rock-facing machine which is used to chip and roughen one type of brick. Chips spilled into piles to be later shoveled into wheelbarrows by clean-up crews. This method of operation produced unsightly piles of chips which were scattered about the yard.

Handling of waste with wheelbarrows resulted in several undesirable conditions. Piles of bats and chips created a safety hazard and curtailed the amount of useable storage space in the yard. A gang of laborers was required to clean areas around the kilns and rock-facing machine. An excessive amount of time was required to push loaded wheelbarrows to the dump.

When the central dump area was built up, crews were sent to shovel waste materials into a dump truck. This second handling of material was a slow, onerous task.

Streamline Waste Handling

In a move to improve yard clean-up and waste handling W. A. Osborn, superintendent of the Bennett plant, purchased 12 self-dumping hoppers made by Roura Iron Works, Inc., of Detroit.

These hoppers can be emptied in a few seconds when a lock-handle on the rear of the hopper is released. They are designed primarily for handling by fork truck but are mounted on casters so they can be moved manually for short distances to follow work flow in the yard.

The twelve hoppers are spotted in the kiln and storage yard by a fork lift truck. Each brick shader has a hopper into which he discards reject bricks. As soon as a hopper is loaded, a fork truck moves in, picks up the hopper, and dumps it into a dump truck. The hopper is quickly returned to the area where the shader is working.

new markets! new profits!
with "hand dressed"
BRICK
by PITCHMASTER

Here is a machine that incorporates the skills of the craftsman with more production muscle than twenty men.

Reach NEW markets, NEW profits by offering a NEW brick with greater depth of beauty.

- Culled brick can be converted to premium priced material.
- Fifty lineal feet of "Hand-Dressed" brick per minute.
- Instant adjustment to material height and depth of pitch. No limitation on material length.
- All material is conveyed through machine in a continuous flow by belts and rollers. Machine maintenance is reduced to the absolute minimum.

No other comparable machine in the field today will match the productivity and dollar profit that PITCHMASTER affords to make it a common sense investment.

NEW AND REVOLUTIONARY IN DESIGN! TESTED AND PROVEN

Names of satisfied users furnished on request

$4000.00
F.O.B. FRANKFORT, INDIANA

E & R MFG. CO. INC.
FRANKFORT, INDIANA

Circle Service No. 55

This article should be of special interest to manufacturers of building brick, various kinds of hollow tile and tunnel kiln operators outside the refractories industry.

Tunnel Kiln Car Top Design

By H. R. Herron
Ass't. Supt. of Walsh Works
Harbison Walker Refractories Co.

The problems of tunnel kiln car top installation and maintenance have as many solutions as the number of plants in which tunnel kilns are used.

While the subject of this article concerns the top tile only, it is realized that there are just as many variations of substructure refractories on kiln cars as there are of the top tile. It is also known that a good substructure is necessary to provide an adequate base for the top tile.

In the minds of most tunnel kiln operators, the ultimate in top tile would be a monolithic surface, covering the entire car, which would not permit sand or brick particles to filter through. With the achievement of this type of car top, along with reasonable service life, the problem would be nearest solution. This design would be more suitable in low temperature operation than at higher temperatures. The problems inherent in monolithic construction and in operation are known to most operators and is not the subject of this article.

The other extreme of car top design is one which permits sand and brick particles, which cannot be cleaned off the top, to sift between the top tile readily and be removed from beneath the top layer. This type of car top is the subject of this article.

There is a difference of opinion among operators as to the optimum size of top tile. Some prefer as large units as can be handled satisfactorily. The reason for this selection is that there will be fewer joints for the sand to filter through, and also, due to the heavy weight of each unit, less tendency for the tile to move about on the car. In most cases, large tile must be manufactured by hand-molding or air-ramming, and cost more than smaller tile. Also, the loss of one of the larger tile is a high percentage of the total material used in a complete top.

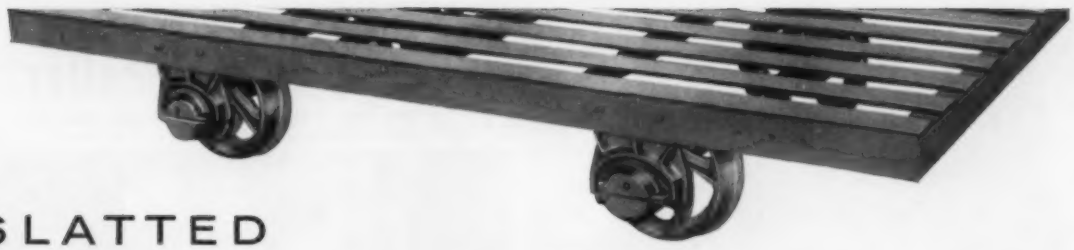
Prefer Small Units

Other operators prefer small units, due primarily to the comparatively small initial investment. Small top tile are usually made by the power press method. In many instances special tile are not used, but standard 9″ brick and other standard rectangular sizes constitute the entire refractory assembly from the frame to the top. Small units involve more joints for debris to infiltrate, with subsequent expansion of the sand and spreading part of the tile or brick until the entire top has spread outward so far that it must be rebuilt.

Some plants use cored top tile, both large and small. These are usually made by extrusion and the open structure contributes to the good properties of heat interchange and spalling resistance with adequate strength.

Continued on page 65

Circle Service No. 49



SLATTED TO SUIT YOUR SITUATION

There's a Chase Dryer Car style suitable for handling every type of ware from heavy clay to porcelain.

Standard Chase Dryer Cars can be adapted to suit your special requirements. Variations in length, width and deck style are available at little or no additional cost, depending upon how extensive the changes are.

Cars are fabricated of mild steel plate with high-carbon channel slats to give extra life to decks. Welding is done in jigs to assure perfect alignment and interchangeability of parts. Castings are high-grade gray iron. Dependable Chase Flexible Bearings keep cars rolling smoothly for years.

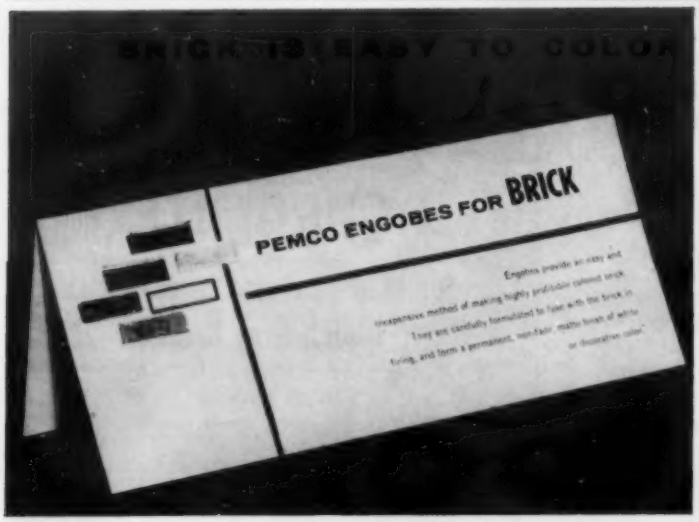
Don't settle for cars that give less service. Next time, order durable Chase Dryer Cars — used in over 80% of U. S. brick plants.

WRITE FOR CATALOG OR SEND SPECIFICATIONS FOR A PROMPT QUOTATION

Chase FOUNDRY & MANUFACTURING CO.

2350 Parsons Avenue • Columbus 7, Ohio

Circle Service No. 50



WITH

PEMCO ENGOBES

Send for color folder

Engobes are compounds of clay, color and frit. Use wet or dry on unfired brick... color fuses permanently in the kiln.

Instructions for application are printed in our color chip folder. Write for your copy now.

50 YEARS OF RESEARCH AND A FLAME

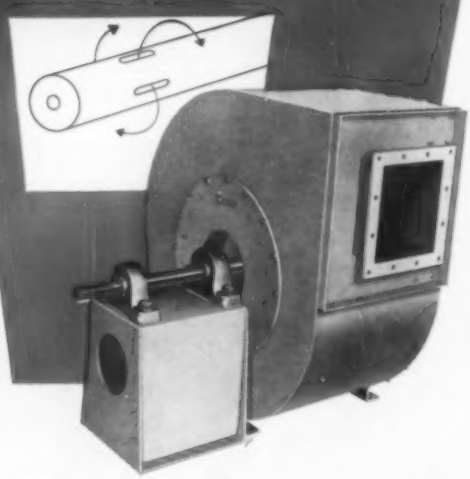
PEMCO CORPORATION

BALTIMORE 24, MARYLAND

Manufacturers of ceramic frits, inorganic pigments, vitrifiable glass colors

Circle Service No. 51

The Winning Combination for Moving Hi-Temp Air... GARDEN CITY Thermal-aire Fans with "AIR-COOLED" SHAFT



When the going gets hot—when temperatures range to 1700°F.—Garden City's combination of "AIR-COOLED" Shaft and Thermal-Air Fans can't be beat. "Built-in" protection of "AIR-COOLED" Shaft keeps bearings running cool when operating temperatures are hot—stretches the life of bearings and withstands years of wear, itself, because there are no extra parts to maintain and replace. Find out about Thermal-Aire Fans—Plug Units, too—with "AIR-COOLED" Shaft for temperatures to 1700°F. or water-cooled shaft for temperatures to 2000°F.

Write today for information on
Thermal-Aire Fans & Plug Units
Radial blade—Forward curved

Member Of Air Moving And Conditioning Association, Inc.

REPRESENTATIVES IN LEADING CITIES

Established 1879

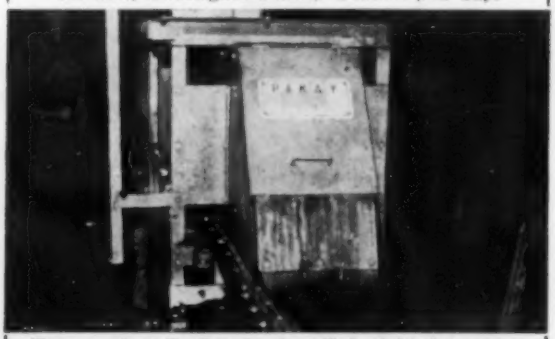
GARDEN CITY FAN & BLOWER Co.

807 North Eighth St., Niles, Michigan

Circle Service No. 45

FLUFFY! BALL FREE! with PeKay Mixer-Muller

For the best blending and mixing at the lowest cost, investigate Pekay before you buy.



Easy to install. Can be installed right into your present conveyor system.

Pekay Mixer-Mullers are designed to reduce segregation and balling and insures uniform mixing. Help improve fired ware appearances and reduce losses. Mixer-Muller can be used with your present mixers to increase production. Can handle 300 tons of granular material per hour.

P-K PEKAY MACHINE & ENGINEERING CO., INC.

865 N. Sangamon St., Chicago 22, Ill.

Circle Service No. 46

...it's FOOTE CHROMITE

for that "natural" coloring in Bluish Gray Bricks

Foote Chromite, when added to buff burning clays, produces highly attractive bluish gray shades that match closely the many shades of natural limestone. Additions of this natural chrome ore in quantities as small as ¾ to 1% produce appreciable coloring values at moderate firing temperatures. Screen analysis of Foote air-floated Chromite is rigidly held to assure uniformity of tone and color development.

Write for complete details on Chromite, Ebony Manganese Ore, Petalite, and Foote's many other ceramic materials.

FOOTE MINERAL COMPANY

442 West Chelten Building
Philadelphia 44, Pa.

Circle Service No. 47

Continued from page 62

Operators generally agree that car top failure often can be caused by the sand filling the joints and pushing the tile out of alignment. The resulting condition of the top leaves much to be desired in a level setting surface. The breakage of ware set on uneven car tops may be the most costly item in tunnel kiln operation. Breakage of tile is another cause of car top failure. The mechanical handling of cars and the ware on them are other causes for car top breakage. Any severe bumping of cars or ramming with lift trucks usually disarrange the car top alignment and soon leads to the necessity of rebuilding.

Marked Success

Large scale experimental work in actual plant operation has been conducted with marked success, on car tops of a new design, in which the top tile construction consists of a combination of small and large units. In this combination, the advantages of small shapes are achieved, and those of the monolithic car top are also approached. This result is accomplished by building the top deck of the car of a number of small brick units of a special interlocking design. A patent has been applied for on this design and construction. The small units may be interlocked to form an entire top or they can be assembled into halves, quarters or any fraction of the top desired. The subdivision depends on the area of the top and the equipment available to handle interlocked units. If the substructure needs repairing, an entire interlocked unit can be lifted off the car by the use of a specially designed fork to fit in the cooling holes. A chain hoist is used to do the lifting.

A small brick unit CT, is manufactured by the power press method and is the basic tile used in the construction of the entire top. Four other tile are required to complete the top. These tile are variations of shape CT and can be either manufactured or cut to size depending on the volume needed.

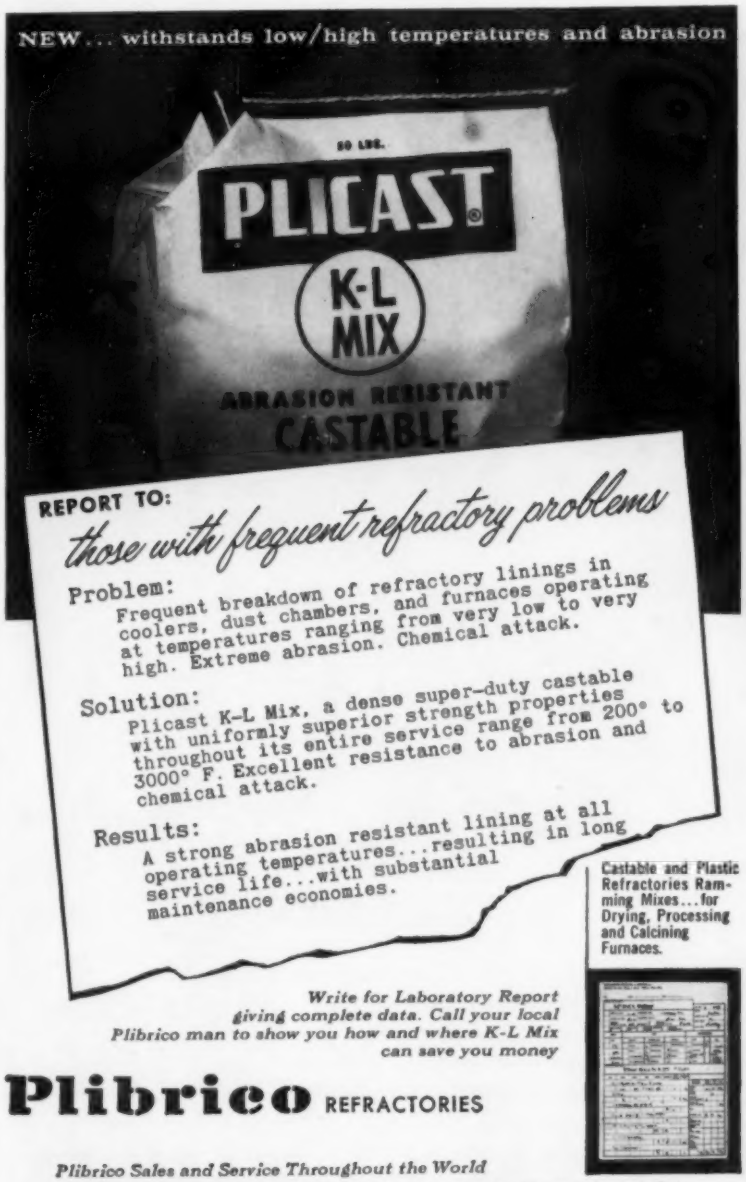
The exact size of the small unit is governed by the area of the car to be covered.

Permit Vacuum Cleaning

The flues on the bottom of each tile permit cleaning with a vacuum lance. The frequency of cleaning depends on the buildup of sand, but ordinarily is done every three rounds.

Cars built with tile of the new design on top have required less repair of the substructure than those with top tile.

Cars with the new design tops have been used in burning ware at cones 15, 18 and 23. The breakage of the tile has been negligible. The tops have remained level and contributed greatly to reduced breakage of ware set on the bottom courses.

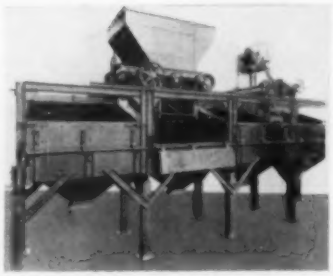

NEW... withstands low/high temperatures and abrasion
50 LBS.
PLICAST®
K-L MIX
ABRASION RESISTANT
CASTABLE
REPORT TO:
those with frequent refractory problems
Problem:
Frequent breakdown of refractory linings in coolers, dust chambers, and furnaces operating at temperatures ranging from very low to very high. Extreme abrasion. Chemical attack.
Solution:
Plicast K-L Mix, a dense super-duty castable with uniformly superior strength properties throughout its entire service range from 200° to 3000° F. Excellent resistance to abrasion and chemical attack.
Results:
A strong abrasion resistant lining at all operating temperatures...resulting in long service life...with substantial maintenance economies.
Castable and Plastic Refractories Ramming Mixes...for Drying, Processing and Calcining Furnaces.
Write for Laboratory Report giving complete data. Call your local Plibrico man to show you how and where K-L Mix can save you money
Plibrico REFRACTORIES
Plibrico Sales and Service Throughout the World
PLIBRICO CO., 1816 Kingsbury, Chicago 14 • Canadian Plant: Toronto, Ont.
REFRACTORY PRODUCTS • ENGINEERING • CONSTRUCTION
Circle Service No. 48

Low Cost—Ease of Operation—Low Maintenance—Minimum Labor

- *Sintering for Lightweight Aggregate*
- *Calcining for prefired clay modifiers*

SINTERING

Lightweight Aggregate can be made from practically any clay, shale, slate or fly ash on this periodic equipment. Excellent for Lightweight clay block production.



CALCINING

Prefiring up to 15% of brick, tile, sewer pipe or refractory clays eases the load on tunnel kilns and produces a better product. Shrinkage, warpage and oxidation are better controlled.

MACE SINTERING HEARTHS

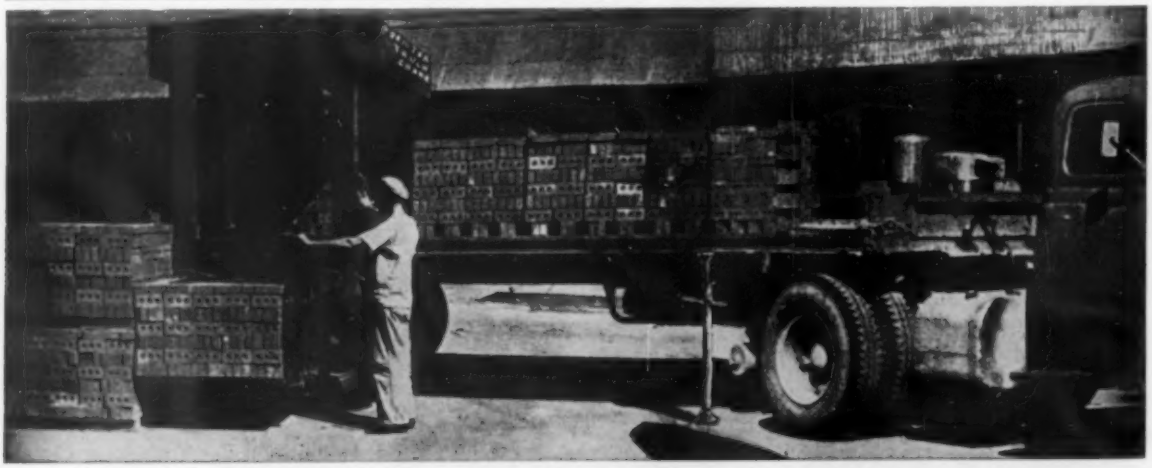
Standard sizes, Nos. 2 to 6 having 2 to 12 compartments producing 50 to 300 Cu. Yds.

Our testing plant is at your service. For further information and literature write:

THE MACE COMPANY

28th & Blake Sts., Denver 5, Colorado

Circle Service No. 56



THE PRIESTER TRUCK CRANE

(PATENTED)

16 units of 500 bricks each unloaded by driver alone, merely pushing buttons.

Unloads off either side. Puts loads on sidewalk where they belong. Requires less than half the unloading space that other devices need. Handles brick or block unpalleted or palleted or packaged. Not necessary to move truck. Unloads one, two or all units at one place! No chipping or breaking bottom bricks or blocks. Gentle handling. For full details, ask for Bulletin TC60.

BRADNEY MACHINE CO., INC.

Middletown, N. Y.

Circle Service No. 57

Continued from page 42

R. L. Coleman (left) and A. R. Wates (center) confer with Virgil Branstetter, plant superintendent.

crete aggregate. Although each particle is honeycombed with cells, they are small and non-connecting. The inherent toughness of the material protects this cellular structure against breakdown under ordinary stress or abrasion.

The Haydite clinker, as it is properly designated at this stage of the process, drops directly from the rotary kilns into a cooling pit which is located between the kilns and the finish grinding section of the plant. An earth work embankment thrown up around the rim of the pit gives it a storage capacity of 20,000 to 25,000 cubic yards. The clinker is distributed in the storage area by means of a stiff-leg derrick which swings a two cubic yard yard bucket from an 80 foot boom. This American Hoist and Derrick unit is also used for feeding raw clinker to the finish grinding circuit.

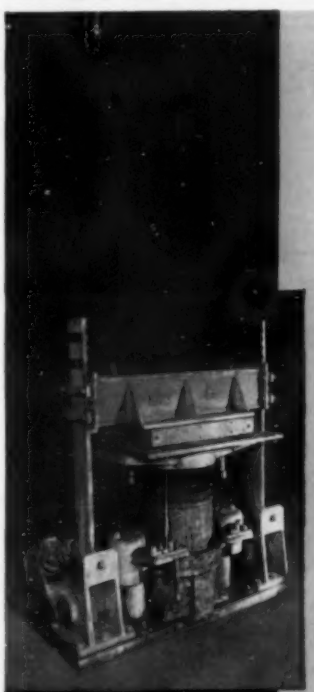
Primary crushing of the clinker is done in a jaw crusher which reduces the feed down to a maximum size of four inches. The material drops from this unit into a steel tank which acts as a surge bin. From there it moves on a reciprocating feeder, belt conveyor, and bucket elevator, to either a Cedar Rapids No. 4033 Hammermill equipped with Lime-type tips or a six-foot diameter Eagle Iron Works rim discharge grinder. Both these machines are adjusted to reduce the clinker to about one half inch in size.

Final sizing of the Haydite is done on two sets of double deck Deister vibrating screens which are mounted on top of the four finished product silos. The screens separate the Haydite into the four standard sizes: Number 1 which is material minus ⅛th inch; number 2 which is material minus ¼th inch plus ⅛th inch; number 3 which is minus ⅜th inch plus ¼th inch; and number 4 which is minus ⅝th inch to plus ⅜th inch. The four finish sizes are stored separately in the silos, each having a capacity of 450 cubic yards.

Flows from Silos

Haydite flows from the silos to manually operated gates onto a belt conveyor located in the concrete tunnel which the silos straddle. Straight sizes or any desired blend can be loaded to the customer's specifications.

Albert R. Waters, one of the original incorporators of the Carter-Waters Corp., is now serving as Executive Chairman of the Board. Walter Beanway is president of the Carter-Waters Corp., with R. L. Coleman serving as V.P. in charge of production. R. E. Walker is V.P. and General Sales Manager, while John E. Bethel serves as Secretary-Treasurer. At the New Market plant Virgil Branstetter is plant superintendent.



Tabor "350" machine applies squeeze and jolt simultaneously while molding super refractory at Richard C. Remmey Sons Co., Philadelphia subsidiary of A. P. Green Fire Brick Co.

New Type Jolter Increases Refractory Production

—better compacting, smoother finish

The Tabor "350" replaces pneumatic rams, and hydraulic presses in the molding of refractories — cylinders, saggers, recuperator tubes, shelves, furniture, intricate shapes.

When the mold has been filled, a pre-jolt settles the particles, and starts the squeeze-jolt operation — a 12,000 lb. squeeze combined with continuous hammering by a 525 lb. anvil, striking at 7 blows per second.

Faster, more efficient than ramming. No need for expensive press equipment.

For superior orientation of grains, improved lateral flow, smooth and even surface finishes, investigate the Tabor "350". Call or write us today.

TABOR
TRADE MARK

TABOR MANUFACTURING CO.
Division of Turbo Machine Company
LANSDALE, PA.

Circle Service No. 58

CLASSIFIED ADVERTISEMENTS

Limited to Want Ads, Consulting Engineers, or Used Equipment ads, (wanted or For Sale)

TRANSIENT WORD ADS: 12c per word for each insertion.

Headings such as "Wanted", "For Sale", etc. and address to be counted as part of the ad. Minimum charge $2.00 each insertion.

POSITION WANTED ADS: $1.50 for 25 words or less; each add'l word 10c.

FOR USE OF BLIND ADDRESS: (Care of BRICK & CLAY RECORD) count as 15 words to cover cost of handling and forwarding replies.

DISPLAY-BOX TYPE ADS

$15.00 per inch. On advance orders for twelve consecutive issues, $12.00 per inch per insertion. (No retroactive adjustment).

An inch is measured vertically on one column, 2¼" wide; three columns on a page. For a two-column advertisement add together height in each column.

Display classified advertisements are set and rates apply in half-inch multiples. (1 inch minimum; 5 inch maximum).

Add 25% to above rates for Reverse Plate (white lettering on black background).

All rates based on payment in advance except on regular contract.

No Agency Commission or Cash Discount

BRICK and CLAY RECORD
5 South Wabash Avenue, Chicago 3

WANTED—HELP

WANTED: Assistant superintendent for small brick plant in Oregon manufacturing face brick, excellent opportunity with good pay. In replying state complete background in brick industry in detail. Write Box 7-ABL, care of BRICK & CLAY RECORD.

WANTED—Production superintendent for a midwestern clay pipe manufacturer. Applicant must have experience in horizontal extrusion and burning of ware in tunnel and periodic kilns. In reply please state complete background. Address box 8-AGP, care of BRICK & CLAY RECORD.

WANTED: Working Foreman familiar with all phases of the manufacture of face brick and capable of installing fork lift truck, brick setting system in 30 ft. round down draft kilns—in small West Coast plant. Excellent opportunity with good pay. State complete background in brick industry. Write Box 7-AGT, care of BRICK & CLAY RECORD.

ASSISTANT SUPERINTENDANT for established brick plant, tunnel and periodics, located central North Carolina. Give previous experience and details. Address Box 8-AFA, care of BRICK & CLAY RECORD.

POSITION WANTED

PLANT Manager or Superintendent desires position with reliable and progressive firm. Years of experience in manufacturing of tile and face brick in both periodic and tunnel kilns. Family man with good references. Address box 7-AFS, care of BRICK & CLAY RECORD.

FOR SALE—PLANT

FOR SALE OR LEASE—Small Brick and drain tile plant in South-Central, operating condition, shale clay. Will finance sale, owner has other interests. Address Box 8-AFY, care of BRICK & CLAY RECORD.

FOR SALE—USED EQUIPMENT

FOR SALE—Complete operating line of brick and tile making MACHINERY, with motors and conveyors in A-1 condition for quick sale in Mid-South. Address Box 8-ABM, care of BRICK & CLAY RECORD.

1-Toronto 6' Type "C" Dry Pan with 20 HP chain drive with new screen plates and all new wearing parts. Can be converted to Wet Mixing Pan. Good condition, rebuilt and guaranteed.

THE TORONTO FOUNDRY & MACHINE CO.
Toronto, Ohio

FOR SALE—USED EQUIPMENT

FLINT CLAY—P.C.E. 34-34—Crude or ground —For sample & analysis, write Consolidated Clay Mines—Negley, Ohio.

BRICK MACHINES: FRH Jr. Steele 30, 40, 50 dearing. Others: #1, #2 Steele, Ray. Freese GH w/10' pug & D18 Disc Feeder. Clay Mine Equipment—rent or buy. Boyd 4 mold, Gates 2 mold DRY PRESSES 4, 5, 6, 8, 9' DRY PANS. 8' WET PANS. MILLS: 10, 11, 12' PUG. Raymond 5047, Williams Gnome Roll. 2424, 3630, 3650 Dixie. #30, #40 Williams Hammer, 5x17, 5x21 Ball West. staty COMPRESSOR 750 CFM d/c motor DRYERS: 3x15, 4x20, 5x24, 8x70 TUNNEL KILNS: Ladd Cronin circular 70' dia. Four: 120-150' long. 400 sqi. deck DRYER CARS 24" & 26" ga. #4, #5 & #6 Steele DISINTEGRATORS Steel Buildings 30x90', 80x220'

MID-CONTINENT EQUIPMENT CO., INC.
8321 Gannon St. Louis 32, Mo. Wydown 1-2826

FOR SALE

BRICK & HOLLOW TILE MACHINES—Dearling & Non-dearing
PUG MILLS—Single & Double Shaft
GRANULATORS—Chambers 51 & Freese 16
CUTTERS—Steele 18, Freese & Hand Drain Tile
DRY PANS—7', 9'
HAMMER MILLS—Many Sizes & Micro
CONICAL ROLLS—Chambers #10
SMOOTH ROLLS—16x30, 30x36, 16x10
DISINTEGRATORS—12", 18" & 24"
JAW CRUSHERS—24x13, 24x36, Lab Size
ROTARY DRYERS & KILNS—3x30, 3x50, 6x50, 7x50, 8x125
LAB MILLS—Hammer Mill, Cone Crusher, Cone Blendor
SLIP LAWNS—Crossley Double Deck

5" LAB PUG MILL EXTRUDER
LAB SIGMA BLADE MIXERS

HAND TILE PRESS
MIXERS—Lancaster EAG 3 & 4, Clearfield 610, Blystone, Simpson No. 3 Apko Sigma Block
SCREENS—Hummer 2x5, 4x10, Cedar Rapids 3½ x10, Single, Double & Triple Deck
FEEDERS—Disc, Apron, Reciprocating
HARDINGE CONICAL MILLS—4', 6', 7', 10'
PEBBLE MILLS—Various Sizes
FANS, PRESSURE BLOWERS—Many Sizes
PYROMETERS, Recording, w/couples

LIST YOUR SPARE EQUIPMENT WITH US

ROBERT L. CLARE
212 Rector St. Perth Amboy, N. J.
Phone Hillcrest 2-0061

RAILS AND DRYER CARS

250 Single Deck Dryer Cars
40 Triple Deck Dryer Cars
50 Rack Cars

All sections rails and track supplies. New Wood Pallets made to your specifications.

M. K. FRANK
401 Park Bldg. Pittsburgh 22, Pa.
480 Lexington Ave. New York 17, N. Y.
185 Lake Street Reno, Nevada
1209 Metropolitan Bank Bldg. Miami 32, Florida

STOP GREEN SCUM
Insure Permanent Color-Control On Light Face Brick with MINERVA FLUORSPAR

Minerva Fluorspar vitrifies brick at low temperatures. Prevents migration of vanadium salts to surface of brick where it oxidizes to form green scum.
COSTS APPROX. 50c per ton of clay. Send for free booklet and free Test Sample. Write Today to

THE MINERVA COMPANY
FLUORSPAR DEPT. B-8-8
ELDORADO, ILLINOIS

WALTER C. STOLL & SONS
New and Used CLAY WORKING MACHINERY
5028 Alhambra Ave., Los Angeles 32, Calif.
CApitol 2-1141

FOR SALE—USED EQUIPMENT

FOR SALE
QUALITY REBUILT EQUIPMENT

MIXERS
Simpson #0, #1, #1½, #2, #3, #3½
Clearfield #410, #610
Lancaster #EBG-4, #EA-4
Jeffrey Continuous
Baker Perkins #4A
Besser 40 cu. ft.
Blystone #3A, #B-1

SCREENS
Simplicity, Jeffrey, Link Belt
Single deck, double deck, revolving deck

BUCKET ELEVATORS
Rebuilt—All capacities as per requirements

CONVEYORS
Oscillating Pan Feeder Conveyors 8", 12", 18", 24" widths—varied lengths
Trough and flat belt
Rebuilt, any capacity

BELTING
New—18", 20", 24"—4 ply—30 ozs.

AAA MACHINERY & EQUIPMENT CO.
10900 Cedar Ave., Cleveland, Ohio
Sweetbriar 1-3900

FALL BARGAINS

DE-AIRING MACHINES, #30 JC Steele FRH #6WJ6, Bonnot Combination, Chambers #9C, American 404-A, International #470, International Falcon.

CUTTER, Steele #18, Model BLH, Freese C-25, and C-20.

ROLLS, Disintegrating, Steele 24 x 24, 12 x 24, smooth roll 18 x 24.

DRY PAN, 9' Stevens, 9' Bonnot.

SCREENS, Tyler Hummer, Cedar Rapids, Sturtevant.

DRYERS, Rotary. Various sizes from 2x30 to 8 x 175.

FERNHOLTZ MACHINERY CO.
8468 B Melrose Place
Los Angeles 46, California

JUST PURCHASED!

2—Davenport 8' x 60' rotary dryers, ⅞" welded shell, comb. chambers, burners, fans.
1—Louisville 7' x 70' rotary kiln, ½" welded shell, burners, varidrive, firing hood, 1952.
1—Louisville 7' x 70' rotary cooler, ½" welded shell, 1952.

IN STOCK
ROTARY DRYERS & KILNS

1—Vulcan 10' x 11' x 175' rotary kiln, ⅜" shell.
3—National 10' x 78' rotary dryers, ¾" shell.
2—Hardinge 8'8" x 70' rotary dryers, ⅝" welded.
1—8' x 60' rotary kiln, ½" welded shell.
2—Stearns-Roger 8' x 40' rotary dryers.
1—7'6" x 62' rotary kiln, ½" shell.
1—Allis-Chalmers 7' x 5' rotary dryer, ⅝".
1—6' x 7' x 100' rotary kiln, ⅞" shell.
1—Louisville 6' x 50' rot. steam tube dryer.
2—4'9" x 32' rotary dryers, ⅜" shell.
1—Ruggles-Coles 5'6" x 40' rotary dryer.
1—Standard 3' x 23' rotary dryer, ¼" shell.

PERRY EQUIPMENT CORP.
1432 N. 6th St. POplar 3-3505 Phila. 22, Pa.

FOR SALE—USED EQUIPMENT

DESIRABLE EQUIPMENT AT REALISTIC PRICES

Crushers and Hammer Mills
Muller type Mixers-Mills
Rotary Dryers and Kilns
Sifters, Screens, Separators
Filter Presses and Filters
Ball & Pebble Mills
Raymond Imp Mills, All Sizes
Presses and Pellet Machines

Send for "First Facts"

FIRST MACHINERY CORP.
209-10th St. Bklyn. 15, N.Y.
ST. 8-4672; Cable "Effemcy"

FOR SALE—USED EQUIPMENT

1.) 200 single deck dryer cars 24" gauge, slats running crosswise for package setting.
2.) Approximately 40 triple deck cars, slats running lengthwise.
3.) One Chambers twin tub pug-mill without drive or clutch.

WEST BROTHERS BRICK COMPANY
6600 Sheriff Road
Washington 27, D.C.

FOR SALE—USED EQUIPMENT

DE-AIRING MACHINES—FRH (PA4) 3HP—FRH (PR6) 7½HP—J. C. Steele 50 Special, 15" auger 100 HP—Bonnot 18" auger 150 HP—American (801) 18" auger 200 HP

CUTTERS—Automatic Reel—J. C. Steele #18—Freese P25, 10" belt—Chambers #10, Roman & Norman brick

PUG MILLS—9' Freese—10' American (2nd shaft)—15' Granulators Freese/Chambers

DRY PANS—7' American—9' Bonnot—2 American 418 grinders

DRYERS—24" x 24"—3' x 24'—5' x 40'—6' x 20'—7' x 58' (50 HP gearmotor)

CRUSHERS—DISINTEGRATING—18" x 16", 24" x 12"—30 x 16—24 x 30

LAWLER COMPANY
Metuchen, N. J. Liberty 9-0245

Side Dump Cars: 130—1½, 2, 3 and 12 Yards
Gasoline Locomotives: 4, 6, 8 and 14 tons
Diesel Locomotives: 6, 10, 25, 45, 65 and 80 tons
Smooth Roll Crushers: J. C. Steele 12" and 18"
Automatic Cutter: Freese Model C-25
Rotary Dryers & Kilns: 4'x20', 5'x30', 5'6"x30', 80"x60', 6'x120', 7'x180', 8'x125', 10'x200'
WANTED—Air Compressors—Dryers—Locomotives

R. C. STANHOPE, INC.
603 42nd St. New York 17, N. Y.

MISCELLANEOUS

For Sale—Lower Kittanning buff burning plastic Fireclay. Mine run, crushed, or ground. Consolidated Clay Mines Negley, Ohio.

MISCELLANEOUS

FOR SALE—BUFF BURNING FIRE CLAY, lump or ground. Ask for prices at mine or delivered via truck or railway. Boos & Co., Macomb, Illinois.

F. J. FORD
Representative—Engineer
Clay Working Machinery
Car Tunnel Kilns—Dryers
P.O. Box 537, Dallas, Texas
P.O. Box 385, San Francisco, California

RAILS—TIE PLATES
Frogs & Switches
Track Accessories
W. H. DYER CO., INC.
2110-B Railroad Exchange Bldg.
St. Louis 1, Mo.

T. W. GARVE, P.E.
69 W. Weisheimer Rd.
Columbus 14, Ohio
Engineering Service. Clay Testing
DRYERS & KILNS TO FIT
We have designed every type of kiln for every kind of fuel and ware, TO FIT.

USE The Classified Columns
It Pays to advertise in
BRICK & CLAY RECORD

Cut Down Firing Problems That Cause Rejects . . . Lost Man Hours . . . Costly Shutdown

OPERATING THE TUNNEL KILN

(A "How-To-Fix-It" Handbook)

by J. T. Robson, Ph.D.
Allied Engineering Div. Ferro Corp.

Here, stripped of all theory, are the practical "cures" . . . handily indexed . . . for firing difficulties encountered in tunnel kiln operation.

$8.00 Per Copy

BRICK & CLAY RECORD
Book Dept.
5 South Wabash Avenue, Chicago 3, Illinois

4 BIG REASONS

serve industry best

❶ ELIMINATE BLINDING
●
❷ INCREASE TONNAGE
●
❸ BUILD GREATER PROFITS
●
❹ SPEED PRODUCTION

Hanco ELECTRIC SCREEN HEATERS

PIONEERS IN ELECTRIC SCREEN HEATING

F. R. HANNON & SONS Hanco
1605 Waynesburg Rd. S.E., Canton 7, Ohio
Circle Service No. 60

Orefraction®
ZIRCON
GRANULAR AND MILLED

THE TRADEMARK OF QUALITY

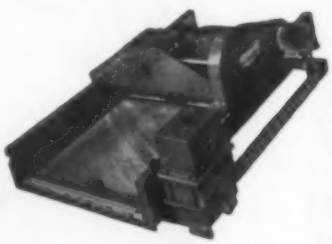
REMEMBER — THERE'S NO BETTER ZIRCON THAN OREFRACTION ZIRCON.

Write for — New Ceramic Industry Data Sheet on Orefraction Zircon

Orefraction MINERALS INC.
P. O. BOX 247 ANDREWS, S. C.

Circle Service No. 61

For Highest Screening Efficiency in Your Plant



THE Leahy NO-BLIND VIBRATING SCREEN
— offers — INTEGRATED HEAT SCREENING

The Leahy® screen with Flex-Elex® heating of the jacket is in a class by itself when it comes to the efficient operation of your plant's screening section.

Although commandeered for use in other fields, it was designed and perfected especially to meet the unusual problems of the heavy clay industry. Everything about it is engineered and fully integrated into its basic design and construction. Even the heating is not an attachment, but cleanly built-in for most efficient performance. There are no bothersome flexible connectors—no special jacket changing problems.

It leads the field easily. Its advantages are yours to have and enjoy profitably. Send for Bulletin 16-EH.

THE DEISTER CONCENTRATOR CO., INC.
The Original Deister Co., Est., 1906
913 GLASGOW AVENUE FORT WAYNE, INDIANA

Circle Service No. 62

Continued from page 59

The company employs 86 people in the plant and eight as office and supervising staff. 450,000 brick are made per week.

The latest addition to the plant was the new stiff mud line and tunnel kiln which was completed in 1958.

Charles Locher III is now the president of the company and the fourth generation in the business. His plans for the future of the plant include additional expansion.

List of Equipment

Front End Loader (pit)	*Frank G. Hough Co.*
Dragline (pit)	*Koehring Co.*
Clay Trucks	*Ford Motor Co.*
Dragline (stock pile)	*Northwest Engineering*
Front End Loader (stock pile)	*Caterpillar Tractor Co.*
Clay Feeders	*Link Belt Co.*
Smooth Rolls	*J. C. Steele & Sons*
Pug Mill	*Starkey Machine Co.*
Pug Mill	*J. C. Steele & Sons*
Soft Mud Machine	*Posey Iron Works*
Belt Conveyor	*Posey Iron Works*
Saws	*Clipper Mfg. Co.*
Diamond Wheels	*Clipper Mfg. Co.*
Periodic Kiln Burners	*North American Mfg. Co.*
Metal Building	*Forrest Paschal (Engineering Assoc.)*
Pug Mill Model E	*J. C. Steele & Sons*
Auger Machine Model 40E	*J. C. Steele & Sons*
Cutter #18	*J. C. Steele & Sons*
Sand Blast	*Pangborn Corp.*
Disintegrator	*American Clay Machinery Co.*
Smooth Rolls	*J. C. Steele & Sons*
Apron Feeder	*Link Belt Co.*
Conveyor	*Mfgrs. Equipment Co.*
Car Tops	*Paco Corp.*
Car Tops	*A. P. Green Fire Brick Co.*
Refractories	*A. P. Green (Pyro) Fire Brick Co.*
Kiln Controls	*Minneapolis Honeywell Corp.*
Kiln	*Harrop Ceramic Service*
Burners	*North American Mfg. Co.*
Blowers	*North American Mfg. Co.*
Fans	*Robinson Ventilating Co.*
Hydraulic Pushers	*Engineering Assoc.*
Car Transfers	*Engineering Assoc.*
Lift Trucks	*Clark Equipment Co.*
Brick Forks	*Bickerstaff, Inc.*
Water Spray Nozzles	*Bosman Co., Lynn, Mass.*
Car Bearings	*Timkin Roller Bearing Co.*
Hoppers (dirt)	*Roura Iron Works*
Refractory Cement	*Universal Atlas Cement Corp.*

ADVERTISERS INDEX

A

Acme Steel Co. 9
*American Clay Machinery Div. of Huber-Warco Co. 74
American Truck Body Co. 27

B

*Babcock & Wilcox Co. 10
Besser Co. 13
*Bickerstaff, Inc. 6
*Bonnot Co. 2
Bradney Machine Co. 66
Brick & Clay Record 16, 69
Buffalo Forge Co. 56-57

C

Ceramic Data Book 22
*Chambers Brothers Co. 8
Chase Foundry & Mfg. Co. 63
Chisholm, Boyd & White Co. 31
Clark Equipment Co. 34
Classified Ads. 68-69

D

*Deister Concentrator Co. 70
Des Moines Glove Mfg. Co. 60
Dodge Mfg. Corp. 24
*Drakenfeld & Co., Inc., B. F. 4

E

E & R Mfg. Co. 61

F

*Fate-Root-Heath Co. 73
*Ferro Corp. 28
*Foote Mineral Co. 64

G

*Garden City Fan Co. 64
Green Fire Brick Co., A. P. 15

H

*Hannon & Sons, F. R. 69
*Hommel Co. 71
*Huber-Warco Co., American Clay Machinery Div. 74
Hyster Co. 23

J

Jeffrey Mfg. Co. 50

K

*Kimberly-Clark Corp. 18

L

*Lanly Co. 39
Lead Industries Assoc. 12
Link-Belt Co. 58

M

Mace Co. 66
*Miller Equipment Co. 52

N

*National Lead Co., Titanium Alloy Mfg. Co. 7
National Paint & Manganese Co. 60
*North State Pyrophyllite Co. 17

O

*Ohio Kilns, Inc. 14
*Orefraction Minerals, Inc. 70

P

Paris Manufacturing Co. 58
Pearne & Lacy Machine Co. 3
Pekay Machine & Engineering Co. 64
*Pemco Corp. 63
Plibrico Co. 65
*Posey Iron Works 71

R

*Refractory & Insulation Corp. 55

S

Simplicity Engineering Co. 59
Steel & Sons, Inc., J. C. 72
Stoody Co. 54

T

Tabor Manufacturing Co. 67
Timken Roller Bearing Co. 21
*Titanium Alloy Mfg. Div., National Lead Co. 7

U

*Universal Atlas Cement Corp. 36
*Universal Vibrating Screen Co. 60

V

Van Gorp Mfg. Co. 62

W

Westinghouse Electric Corp. 11
*Williams Patent Crusher & Pulverizer Co. 43

*See Our Catalog in 1959-1960 Ceramic Data Book

This index is a feature for the convenience of advertisers. It is not a part of the advertiser's contract and Brick & Clay Record assumes no responsibility for its correctness.

NOTHING MEASURES UP TO **HOMMEL** FRITS and STAINS

Hommel ceramic products are the yardstick for the industry . . . a position won through years of highest quality. Whether your requirements are for GLAZE FRITS, or BODY, ENGOBE and GLAZE STAINS, you are sure of the world's finest with Hommel . . . with wide firing range . . . and constant stability. Write or phone for complete information.

Dept. BCR-860

"The World's Most Complete Ceramic Supplier"

THE O. HOMMEL CO.

PITTSBURGH 30, PENNSYLVANIA

WEST COAST—4747 EAST 49th STREET, LOS ANGELES

Circle Service No. 63

POSEY OFFERS

BETTER COLONIAL BRICK

with the new

1960 Model 42-0

AUTOBRIK MACHINE

and automatic Pallet Car Loader. Increases productivity . . . boost profits . . . diversify your product line . . . expand your market.

Write for FREE 12 page brochure on automatic brick machinery.

POSEY IRON WORKS INC.

Custom Fabrication For Over 50 Years

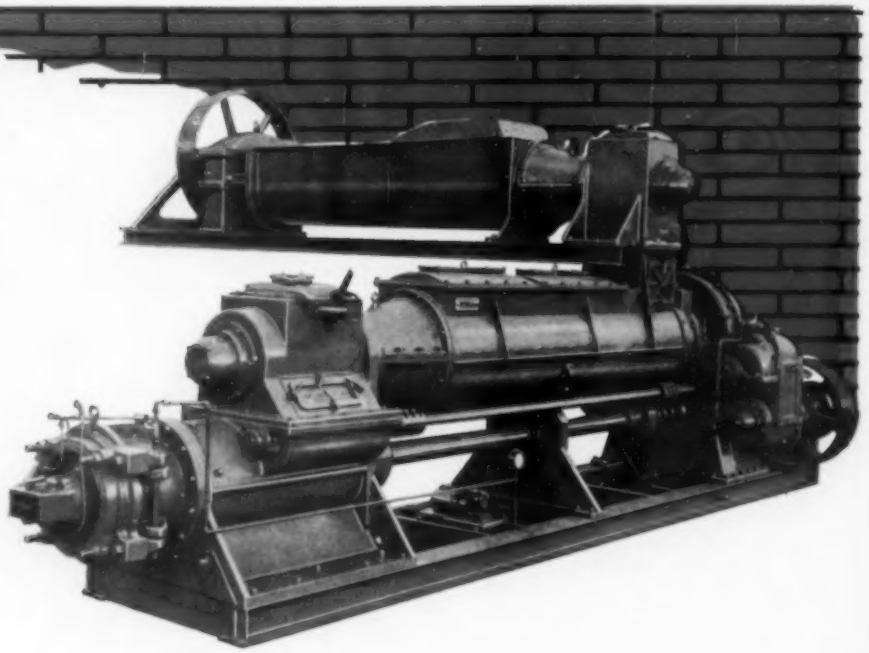
DIVISIONS:

• Iroquois Asphalt Plants • Mixers and Blenders
• Tunnel Forms • Industrial Heating • Foundry
• Large OD Steel pipe

100 SOUTH STREET LANCASTER, PA.

Circle Service No. 64

Vacuum Pugging Will Help You



IF your clay is low in plasticity
IF you blend different clays

The STEELE 60 FV shown above with the 50 F Pug Sealer on top is one of ***six*** STEELE de-airing models providing vacuum pugging ***in addition to*** vacuum extrusion.

It pugs the clay ***twice,*** compresses and shreds ***twice.*** Exposes clay to vacuum ***many times*** as long as conventional machines.

Mechanically it's tops.

The ***three*** independent drives can handle more than ***400 H.P.*** week after week, year after year.

Write us for complete details.

Pacific Agents: Walter C. Stoll, 5028 Alhambra Avenue
Los Angeles 32, Calif.

J. C. Steele & SONS, Inc., Statesville, N. C.

• THE BEST IN CLAY MACHINERY SINCE 1889 •

Circle Service No. 65

"F-R-H De-airing Extrusion Machines . . . ideal for producing conduit, other heavy products"

Report Brazil Hollow Brick & Tile Company, Brazil, Ind.

Brazil Hollow Brick & Tile Company, Brazil, Indiana uses two F-R-H Model "WJ" de-airing extrusion machines in the production of clay telephone conduit. Production of 150 tons of conduit per 8 hour day is maintained using one machine or the other to extrude sizes as needed.

Here's what W. M. Price, president of the Indiana firm has to say about the performance of F-R-H equipment:

"We find F-R-H de-airing machines particularly well suited to the production of heavy clay products — such as the telephone conduit we manufacture, and repairs on our F-R-H equipment have been very minor—especially so, considering that 1 F-R-H unit has been in continuous operation for 30 years—the other, for 12 years. Parts replacement does not disturb the permanent seal of the vacuum chamber." Find out today how F-R-H Brick and Tile Machines can increase production, improve product quality, reduce operating and maintenance costs *for you.* Simply send a brief outline of your operations to The Fate-Root-Heath Company, Dept. B-1, Plymouth, Ohio.

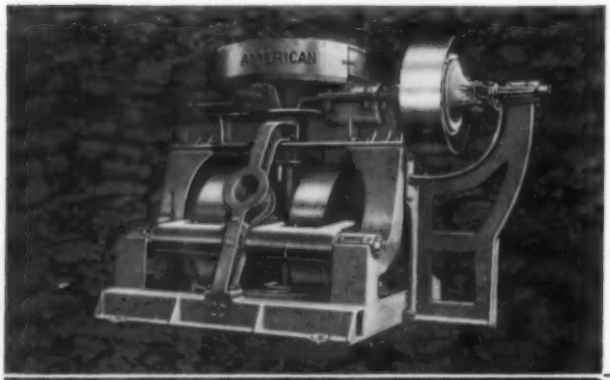
F-R-H

CERAMIC MACHINERY

FOR 100% OPERATING EFFICIENCY • ORDER GENUINE F-R-H REPLACEMENT PARTS DIRECTLY FROM THE FACTORY

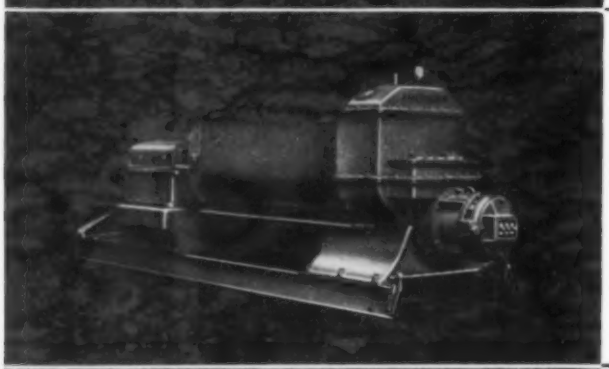
Circle Service No. 66

MAKE *American* THE START OF AutoCLAYmation PLANNING



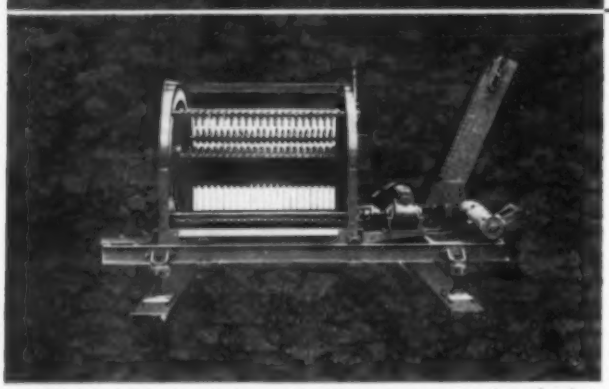
AMERICAN GRINDERS

Designed for volume clay production . . . eight models range from 15 to 80 tons per hour capacity. Materials can be handled wet or dry . . . no screen plates to clog or slow down production. Low initial investment . . . requires only a minimum of floor space . . . low power consumption . . . needs only a minimum of maintenance.



AMERICAN DE-AIRING COMBINED MACHINES

Machine handles building, fire or paving brick, also hollow block and drain tile. Capacity range is from 3,000 to 18,000 building brick per hour or 10 to 40 tons of hollow ware per hour. This capacity is governed by the clay used, size and kind of ware manufactured and by the operating speed.



AMERICAN AUTOMATIC ELECTRIC CUTTERS

Hourly capacity is 3,000 to 18,000 bricks . . . 23 standard bricks per cut. Every motion is electrically controlled to give precision accuracy of any brick or tile cut up to 14"x14". The cutter is a complete unit, there are no extras needed. Hinged measuring frame can be lifted to give necessary room to change die or front.

AutoCLAYmation stands for more efficient means and methods in the production of clay production. "American" clay machines fit into AutoCLAYmation planning because they are designed for volume clay production . . . production that will spell profit for your operation. "American" specialists have the experience to design and outfit a complete plant from pit to kiln, or solve any phase of a brick or tile production problem. Write or call for complete information.

American CLAY MACHINERY

A Division of HUBER-WARCO COMPANY
Marion, Ohio, U.S.A.

Plants in Marion and Bucyrus, Ohio
Cable Address: HUBARCO

OVER A CENTURY OF EXPERIENCE IN THE MANUFACTURE OF CLAY MACHINERY

Circle Service No. 67